Staff Report to Management

January 20, 1958

RAILWAY AGE weekly

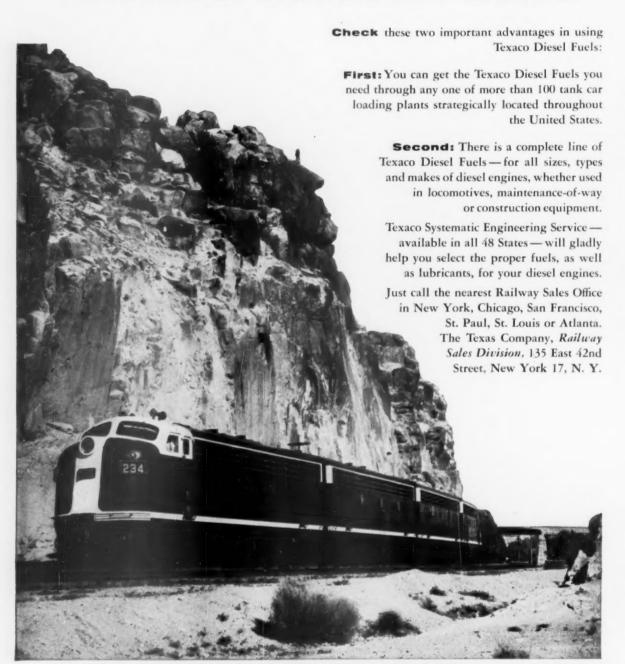
1957 Review

1958 Outlook

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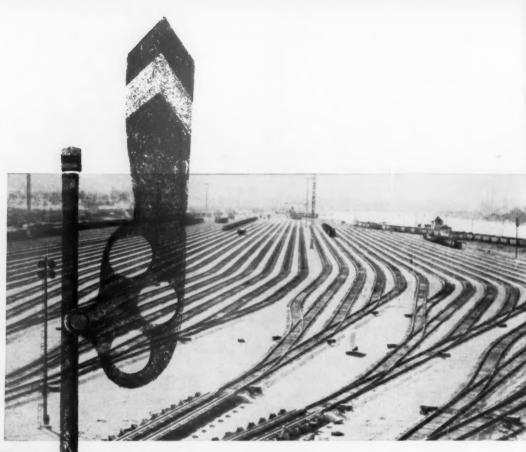
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# Week **Glance**

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#### We need fast action, Loomis tells Senators ......p. 9

Unless Congress acts quickly in the "deteriorating railroad situation," the threat of receivership must be faced, he says. He sees bankruptcy more likely than federalization. The AAR president is followed initially by four railroad presidents: Symes, Macfarlane, DeButts and Perlman.

#### Staff report to management . . .

This issue features the Railway Age annual review and outlook -articles looking ahead into 1958 and a complete report on 1957 operations. Highlights on the issue are covered below.

#### Where the business is and where to aim for more .....p.15

That outlines the big job ahead for railroad rate research. Target for today's studies is to develop rates to boost tonnage and revenues. Rates must be worked up in relation to the costs of the most efficient competition—and such studies can turn up traffic the railroads would be better off without-traffic they're not geared to handle profitably.

#### Railroads vie with Sputnik in Congress ......p.21

Despite the chance to tell their story in current Senate hearings —which they will do well—railroads aren't apt to get much help from Washington this year. Some tax relief is a possibility, but even this may be blocked by defense and other budget needs.

#### Signaling will pay its own way in 1958 ......p.26

Whether traffic is good or bad, signal installation projects should continue to get priority in railroad spending this year. Since savings offset costs, roads can't afford not to push ahead with CTC, electronic yards and similar projects.

#### New ideas spur communications ......p.31

High speed car reporting systems are growing. Stepped-up radio usage makes train and yard contacts easier, more dependable. Microwave expansion is being pushed, while use of carrier keeps pace in today's lively communications picture.

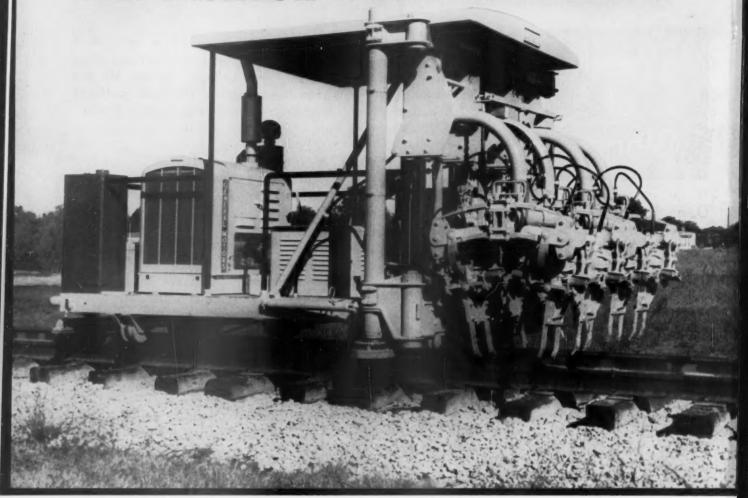
#### Fuel, power developments get new attention ......p.37

The search for new locomotive fuels continues, with the possibility of an important new development this year. Diesels roll most of today's traffic but gas-turbines are watched as they acquire a service record. Nuclear power is held unlikely under present thinking—though it could pave the way toward future electrification.

#### Can electrification pay for you? ......p.38

Many factors keep focusing railroad attention on the feasibility

# THE JACKSON TRACK MAINTAINER





Note the direction of the tamping bars which assures perfect consolidation of the ballast in the vital load-bearing zone directly beneath the rail.

#### Only the Best is good enough!

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## Week at a Glance CONT

#### Current Statistics

Operating revenues, eleven mont	ths
1957\$9,6	
1956 9,6	
Operating expenses, eleven mont	
1957\$7,5	
1956 7,4	13,175,457
Taxes, eleven months	
1957\$1,0	11,020,756
1956 1,0-	46,585,941
Net railway operating income, ele-	ven months
1957 \$86	63,352,199
1956 98	84,434,802
Net income estimated, eleven mor	nths
1957 \$66	61,000,000
1956 78	84,000,000
Average price 20 railroad stocks	
January 13, 1958	66.57
January 15, 1957	95.98
Carloadings revenue freight	
One week, 1958	471,749
One week, 1957	561,201
Average daily freight car surplus	
Wk. ended Jan. 4, 1958	96,496
Wk. ended Jan. 5, 1957	11,979
Average daily freight car shortag	
Wk. ended Jan. 4, 1958	20
Wk. ended Jan. 5, 1957	634
Freight cars on order	
December 1, 1957	59,194
December 1, 1956	119,626
Freight cars delivered	00.001
Eleven months, 1957	92,891
Eleven months, 1956	59,820

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#### More mechanication for M/W work ......p.41

Railroads plan to spend more for maintenance-of-way work equipment in '58. The variety and perfection of tools available for track forces grows steadily-offering new potentials in savings. Maintenance budgets over-all will be trimmed this year.

#### The freight car dilemma .....p.46

Acknowledged need today is something like 85,000 new freight cars a year. But the big problem, money, continues. If railroads could agree on design, then regularize buying in large lots, they could trim unit costs. One perennial headache certain to carry over into the coming year is how to improve the hotbox situation.

#### 1958 buying hinges on traffic ......p.51

There are good reasons to expect a business resurgence after mid-year—and if so the railroads will show a parallel pickup. Meanwhile, upward cost trends compel railroads to spend to save and the present living off inventory will be reversed fast with any boost in carloadings.

#### Highlights of 1957 ......p.53

AAR Vice-President J. Elmer Monroe sums up problems and progress of the industry during the past 12 months. This twopage rundown opens a 14-page special feature in which Mr. Monroe reviews all aspects of . . .

#### 1957 Railway Operations ......p.55

Traffic trends, rate and fare changes, employment, financial results, capital spending and purchases, equipment changes, operating efficiency-all this, and more, is spelled out in this first comprehensive story on what happened in 1957. Mr. Monroe illustrates his reports with charts and tables-must reading for every railroad officer and supervisor.

#### Statistical review of 1957 ......p.98

Twenty tables of statistics provide a quick look at railroad activity last year—cash position, purchases and installations of all kinds, and a complete list of construction projects. These are pages to keep and use during coming months. An exclusive Railway Age service to the industry.

#### The Action Page—'58 can be a big year—if we sell .....p.144

The railroads have to become completely commercial. With a good product at a good price and a step-up in sales zeal and skill, they can stem the trend of traffic erosion. And this same salesmanship can be applied to the industry's campaign against political inequities.



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# We Need Fast Action-Loomis

Failure of Congress to act may lead to receiverships, AAR president tells Senate hearing. He sees that as more likely than government ownership if Congress makes no move to alleviate "deteriorating railroad situation." Symes urges transport post in Cabinet.

Widespread railroad receiverships will come unless Congress takes action to alleviate the plight of the industry.

This warning was implicit in the response of AAR President Daniel P. Loomis to a question at the January 13 opening session of the Senate hearing on the "deteriorating railroad situation and its effect on the national transportation picture."

The hearing opened under standingroom-only conditions in one of the larger Senate hearing rooms. The inquiry is a project of the Interstate and Foreign Commerce Committee's Surface Transportation Subcommittee, which is headed by Senator Smathers, Democrat of Florida.

Senator Smathers was the questioner who asked Mr. Loomis if failure of Congress to act would mean that railroads generally would face receivership or the prospect of being taken over by the government. The AAR president gave an affirmative answer, adding that receiverships would be more likely than government ownership.

Previously, Senator Smathers had opened the hearing with a brief statement which referred to "ominous statistics." They pointed up the need, he said, for Congressional study "if we are to keep the railroads alive and out of government ownership."

Mr. Loomis was the first witness at the hearing. He was followed by Presidents J. M. Symes of the Pennsylvania, R. S. Macfarlane of the Northern Pacific, H. A. DeButts of the Southern, and A. E. Perlman of the New York Central. Some 20 other railroad presidents were scheduled to testify at sessions held subsequent to this issue's press time.

Members of the subcommittee, in addition to Chairman Smathers, are Senators Lausche of Ohio, Yarborough of Texas, Democrats; Schoeppel of Kansas and Purtell of Connecticut, Republicans. Several other members of the parent committee were also on hand for the hearing's opening sessions. These included the chairman, Senator Magnuson, Democrat of Washington, and the ranking minority member and former chairman, Senator Bricker, Republican of Ohio.

Mr. Loomis, as he put it, did not undertake to present the entire legislative program of the railroad industry. He made a "few suggestions susceptible of prompt consideration by the congress." They are these:

1. Remove special restrictions that have been imposed upon entry of railroads into motor and water transportation and upon entry of any surface carrier into air transportation.

 Allow increased freedom in making competitive rates as between different forms of transport so each mode will find its economic place.

3. Sharpen the Interstate Commerce Act's definition of private carriage to correct "abuses by pseudo-private carriage that is actually for-hire transportation."

4. Limit the scope of the act's so-called

agricultural commodity exemptions.

5. Give the ICC jurisdiction in the field of discontinuance or consolidation of train service and stations.

6. Repeal the federal excise taxes on amounts paid for for-hire transportation.

7. Provide equitable and realistic tax treatment for the retirement and replacement of railroad facilities by: (A) eliminating the adjustment for past accrued depreciation which was made some 15 years ago when railroads converted from retirement to depreciation accounting for fixed facilities; (B) permitting accumulation of a construction reserve fund to be used for acquisition of rolling stock or other facilities or for reduction of debt incurred for such acquisitions; (C) fixing a maximum depreciable life of 20 years for all railroad property.





C&O Rail Check Car Keeps 'em Rolling-Smooth

More than 3,500 miles of Chesapeake & Ohio track was inspected in a recent tour of the system. Focal point of the checkup was the recording device at left where an operator watches pens charting roadbed variations. Impetus for chart comes from a delicately balanced center truck on the inspection car (right). C&O Vice-Presi-

dent-Operations M. I. Dunn, standing, and T. F. Burris, chief engineer, look over the device which was designed and built by the railroad. Following tour, prizes of up to \$50 were awarded to track supervisors and foremen whose sections of roadbed showed most improvement from a check a year ago.

8. Impose adequate charges for the use of publicly provided transportation facilities.

Mr. Loomis also expressed hope that Congress will refrain from enacting legislation that would "impose unnecessary and unjustifiable burdens or controls upon railroads in the conduct of their business." He had in mind pending bills of the "make-work" type and proposals to liberalize the Railroad Retirement and Railroad Unemployment Insurance Acts.

"Many of the most important and most vexing problems confronting the railroads today stem directly from governmental transportation policies," the AAR president declared. In response to questions from committee members, he said railroads are not presently as bad off as they were in the depression period of the 'thirties. He added, however, that their situation has been deteriorating more than those of other forms of transportation and industry generally.

Mr. Loomis was also asked if he were opposed to having the government subsidize the purchase of carrier equipment. He replied that he would prefer not to state a position without giving the matter some study.

President Symes of the PRR presented a 19-point program, which included all proposals made by Mr. Loomis. Among the PRR president's additional recommendations is his call for favorable action on the Symes plan, which has the backing of eastern roads generally. It proposes creation of a federal agency to acquire locomotives and cars and lease them to the railroads "at rentals sufficient to pay back the full cost of the equipment and a small profit to the government."

Mr. Symes' other recommendations are

- Appoint a Secretary of Transportation as a member of the President's cabinet.
- Help the railroads to maintain commuter service by subsidies and tax concessions where necessary.
- Direct the Post Office Department and the ICC to allow the railroads the full cost of carrying the mails, plus a reasonable profit.
- Limit parcel post service to "very small packages," or arrange for the Post Office to take over the Railway Express Agency, thus eliminating "costly duplication of service."
- Relieve the railroads from unfair state and local taxes, since competing forms of transportation enjoy the use of tax-free facilities.
- Encourage and expedite the consolidation of railroads into "fewer and more efficient systems where it would benefit the public interest."
- Relieve railroads of responsibility to pay for highway safety devices, such as projects for elimination or protection of grade crossings.

Mr. Symes advocated his program as one which "could put the American railroad industry back on its feet and shorten the current business recession." He warned that the alternative "could very well be ultimate government operation of the railroads and other transportation."

To stress the urgency of the situation, Mr. Symes cited figures pointing up the plight of the PRR. That, he said, was no exception but "indicative of the industry situation, particularly in eastern territory." He said indications are that PRR will operate at a deficit of about \$5,000,000 this year. And this forecast includes plans to lay off additional employees, discontinue heavy repair work on freight and passenger cars, and severely cut rail and tie renewal programs.

Questioning by senators brought out Mr. Symes' view that government should cease subsidizing railroad competitors or give like aid to the railroads. He emphasized, however, that he was not advocating subsidies for the railroads. He preferred the alternative of imposing adequate user charges on agencies operating on publicly provided facilities.

President Macfarlane of NP argued especially for repeal of the freight tax. He noted how it aggravates the freight disadvantage of long-haul shippers. And (Continued on page 125)

#### Watching Washington with Walter Taft

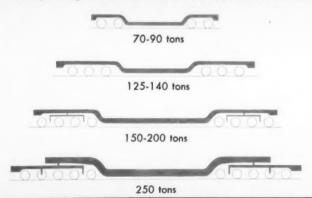
- \$300 MILLION LOSS may hit the railroad retirement account. President Eisenhower's budget message recommends recovery of that amount. It is the estimated total of government overpayments under the military-service-credits plan. That plan charges the government with the cost of including the time a railroader spent in military service as a factor in calculating his retirement benefits. The President wants this government contribution on the pay-as-you-go basis.
- FAR FROM SOUND on an actuarial basis is what the President says of the railroad retirement system generally. To correct the "inadequate long-term financing," he recommends, as he has before, that Congress increase payroll taxes supporting the system. These are levies of  $12\frac{1}{2}\%$  on individual wages up to \$350 a month. Half is paid by the railroads and half by their employees.
- PROMOTION OF AVIATION gets more costly. The President's budget for fiscal 1959 proposes expenditures of more than \$400 million for operation, maintenance and extension of the federal airways system. This would be an increase of about \$100 above like outlays for the current fiscal year.
- FIRST USER-CHARGE STEPS in the aviation field are other Presidential recommendations. He proposes that a tax of 3½ cents per gallon be levied on jet fuels, and that federal taxes on aviation gasoline be increased to that amount. They are now 2 cents per gallon. The President would then build both levies up to 6½ cents per gallon by yearly increases of three-fourths of a cent.
- HAZARDS OF AIR TRAVEL in 1957 appear to have been nearly twice as great as those of travel by rail. The Civil Aeronautics Administration has estimated that last year's fatality rate of regularly scheduled domestic air lines was 0.1 passenger deaths per 100 million passengermiles. Railroad rate for the year's first 11 months was about 0.06. Accidents of December were not expected to change it much.
- WISDOM OF CAR-SHORTAGE REPORTING is being questioned by some railroaders. They point out that carloading figures give the public all necessary information as to trend of traffic. They see shortage figures as showing only railroad deficiencies. And they ask what other industry regularly issues reports which serve no purpose but to confess shortcomings.
- NOW IS A GOOD TIME to end publication of the AAR reports. Shortages haven't been news for several weeks. They averaged only 20 cars per day for the week ended January 4. Surpluses averaged 96,496 cars.



#### Where railroad progress is cast in steel....

General Steel one-piece cast steel underframes for depressed center cars are designed to AAR requirements with low platform heights permitting higher loads. Fully spring-borne Commonwealth equalized trucks are specially designed for high capacity cars.

A complete range of sizes from 70-ton to 250-ton capacities are available.



Creating "ideas in cast steel" to meet the needs of the railroad industry! For more than 50 years this has been the never changing goal of General Steel Castings.

Meeting a railroad need, Commonwealth products are planned and designed to insure a sound economic purchase. For, like General Steel, railroads and other industry must look ahead with long-term operations in mind.

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GENERAL STEEL CASTINGS





# Safest and Savingest Passenger Car Brake

The efficiency of passenger car brakes—their ability to make the shortest stops, safely, and without wheel damage—is, naturally, the first consideration in an industry not only devoted to safety, but also with an unparalleled record for safety.

It is significant, then, that a vast majority of all new passenger cars, regardless of who builds them, are being equipped with Budd disc brakes.

This also happens to be the most economical method of braking passenger trains. Here are figures compiled from railroad experience and accounting, of the savings in wheel life and brake shoe life alone, over wheel tread brakes, with cast iron shoes, on a well-known passenger run.

	With BUDD Disc Brakes	With Composition Tread Shoes
Wheel Mileage (per turning)	240,000 mi.	133,000 mi.
Shoe Life	90,000 mi.	38,095 mi.
*Wheel Savings per car year	\$1,057.36	\$534.00
Brake Shoe Savings per car year	1,360.17	867.66
Total savings per car year	\$2,417.5	3 \$1,401.66

Here is an opportunity for the most direct of comparisons, for all figures are developed from experience with equipment in the same trains in identical service under the same conditions.

The Budd disc brake savings cited do not take into account the additional savings provided by reduced maintenance through simplified design, greater car availability, and the reduction in weight of 2,000 pounds per car with corresponding reduction in required tractive effort.

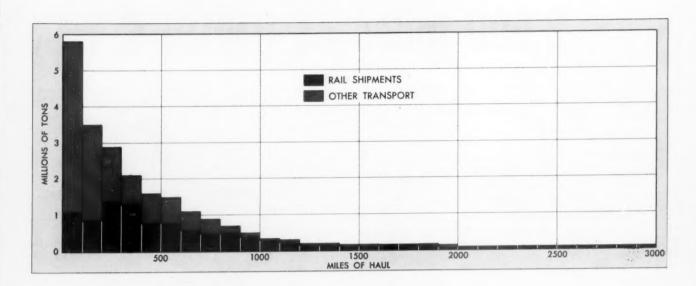
THE BUDD COMPANY, Philadelphia 15.

Dudd

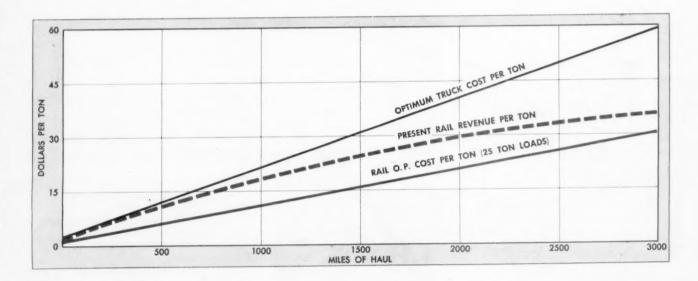
<sup>\*</sup> Wheel savings included in these figures are based on wheel charges specified by the A.A.R. Code of Rules for the Interchange of Traffic, effective January 1, 1957.



# Where the business is now...



# ...and Where to aim for more ...



# ... is the BIG job for research in '58

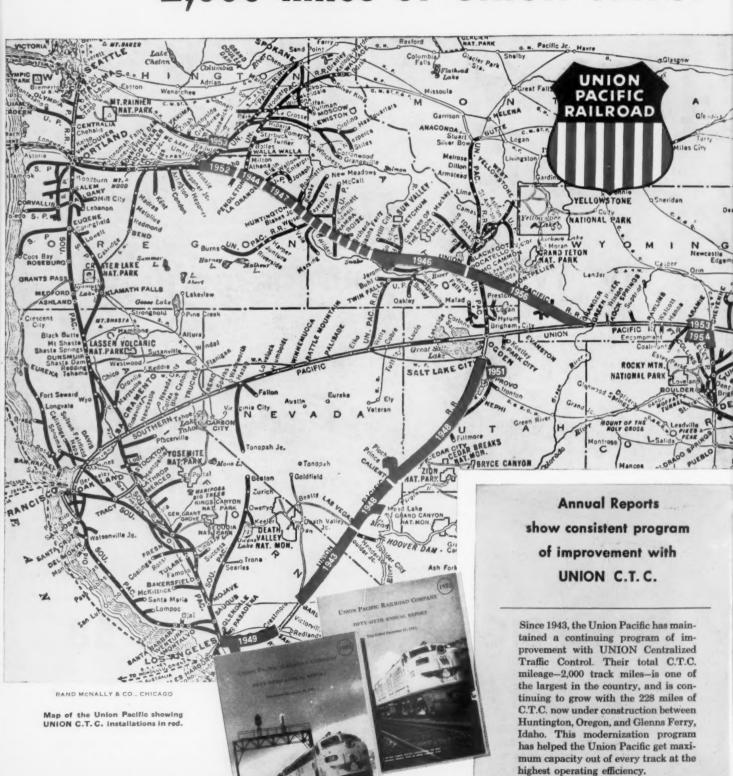
Pregnant with all manner of possibilities for prompting railroad prosperity—that's what may be said of the two above charts. They typify 1957's major innovation in joint market research activity under the direction of chief traffic officers in

two of the nation's three territories—the West and East.

In these two territories market research organizations were established late in the year—to compare existing railroad rate structures with relative movement costs

by rail, and by rival transport agencies; and to find out what tonnage is moving how—and why. As a result of these studies, the economic analysts will be able to recommend, to practical rate men and (Continued on page 18)

# Why UNION PACIFIC uses 2,000 miles of UNION C.T.C.







IT IS ECONOMICAL. C.T.C. makes possible single-track operations over long stretches of the Union Pacific's routes, eliminating the need for double track. This results in substantial economies in maintenance and tax costs. It also permits more efficient use of existing equipment.

**FREIGHT MOVES FASTER.** Because it's possible with C.T.C. to have "rolling meets," all trains get through faster. This is particularly important in mountainous or hilly terrain where any slowdown of heavy freight requires substantially more fuel to build up speed again.

**OPERATION IS MORE FLEXIBLE.** C.T.C. makes it possible to adjust to sudden increases in the flow of traffic. Trains can be re-routed on Union Pacific lines with no appreciable interference with normal operations.

SCHEDULES ARE MORE RELIABLE. C.T.C. has made it pos-

sible to maintain reliable and consistent schedules that build customer good will. Many hours have been cut from former coast-to-Chicago schedules.

TRAIN LOCATIONS ARE ACCURATELY KNOWN.  $C.T.C_{\circ}$  makes it possible for the dispatcher to know at all times where every train in his system is located. This permits much more efficient scheduling of trains out of classification yards.

BETTER-ENGINEERED TRACK LAYOUTS ARE POSSIBLE. In mountainous terrain, there are many engineering problems that can be eliminated because of the flexibility in layout made possible with C.T.C.

UNION traffic control engineers are ready to help analyze the traffic problems for your railroad. Write or call our nearest office for the complete story.

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#### SOUND BUSINESS IS ALSO SOUND ECONOMICS

"Failure to develop cost finding as an active management tool . . . during . . . the past 30 years has been the weakest aspect of railroad policy in meeting the new competition. . . There is now a considerable body of opinion that optimum resource allocation of the economy is to be obtained with incremental cost pricing. . . The tendency has been for railroad price adjustments to be aimed merely at meeting motor carrier rates . . . and incremental rail costs come into play only as a floor below which competitive rail rate adjustments are not made."—Prof. Kent T. Healy to the American Economic Association, December 1956.

(Continued from page 15)

traffic executives, changes in rates to make them much more attractive to profitable tonnage.

Studies of this kind will take many forms—but the above two charts illustrate one fundamental type. The top chart shows the tonnage of the commodity being studied, by mileage blocks—and how the traffic is now being divided between railroads and rival agencies of transportation.

The bottom chart portrays, for the same commodity, a comparison—again by mileage blocks—of existing railroad rates, relative to costs of railroad movement and costs of truck movement.

With the information shown in these two charts, it becomes simply a problem of mathematical calculation for skilled analysts to draw a line portraying a revision in the curve showing railroad rates—rates which would considerably increase railroad tonnage and net revenue in the movement of this particular commodity.

#### **Information Sources**

Reliable data for the preparation of such charts as these are obtainable—but not, of course, without a lot of skillful effort. The information on rail movement and present rail charges can be had from ICC waybill cards. Reasonably satisfactory information on costs of railroad movement is available from the ICC's cost studies. Costs of truck movement have to be estimated by experts in this field, on the staffs of the research organizations.

The cost estimates used for truck movement are "optimum costs"—that is, costs of the most efficient operator. There is not much use paying attention to rates of for-hire trucks in this connection—if railroads are really going to compete for traffic on grounds of relative economy. Because for-hire truck rates may be much higher than "optimum" costs of truck movement.

If railroads gear themselves to meet,

only, the competition of the "average" truck or the common carrier—they may find that it will be a case of love's labor lost. The private carrier is the ultimate competitor—a fellow who usually suffers little "return empty" disadvantage. Unless the railroads gear their rate-making to the capability of their most efficient competitor, they will continue to be in jeopardy. No use going into battle with bows and arrows—if the attacking army has firearms.

The market researchers will, of course, have to collect much of their information from shippers and receivers of freight. It isn't just line-haul rates that determine a shipper's selection of a method of transportation: His choice is determined by overall costs (rates, plus incidental costs, such as packing) plus convenience. And a dollar figure can be put on convenience. That is, a shipper will often put up with slower service if the monetary saving is large enough.

The researchers will get this kind of information from shippers, and will, of course, give effect to these considerations in their recommendations regarding rates. Such data can be evaluated with mathematical precision by modern analytical methods. Given the benefit of some practical experience-including a reasonable allowance for initial experimental errorscapable analysts should be able to design a rate structure with assurance that it will maximize traffic and earnings. This kind of analysis has worked successfully to solve pricing problems of other industries, and there are no compelling reasons why it won't work for railroads.

In the initial stages, of course, compromises with the "ideal" rate structure will continue to be necessary—to avoid ruinously sudden changes in "relationships." That is why the market researchers' work, to be practical, is being done—must be done—in constant contact with expert rate officers. Rome wasn't built in a day—but neither was it built by haphazardly laying a brick at a time. Both the gradual

process, and the over-all plan, are needed for satisfactory results.

Probably, though, the importance of "market relationships" is often over-emphasized—because the relationships have already been broken by unregulated carriers. Competent research can also determine the degree of importance of railroad rates in determining whether a given producer is to stay in business. Shippers sometimes may overemphasize the importance to them of "paper rates"—which never move any tonnage.

Market research of this kind-if pursued as a continuing policy-can unquestionably improve railroad claims to increased profitable tonnage. It will also draw attention to situations where railroads are handling traffic at an out-ofpocket loss. A dollar of loss that is eliminated is just as good a dollar as a dollar's increase in profitable traffic. Trucks and other transport agencies can handle some traffic more economically than railroads-and railroad service should be priced to let them have it. All forms of transport-and the whole transport industry-will profit from a system of rates which channels traffic to the agencies best adapted to handle it.

As rate and market research develops, it will discover those "shapes" of existing rate progressions which have been most successful in holding desirable traffic to the rails. If some "shapes" are discovered to be especially effective maximizing traffic and revenue—no reason why such "shapes" shouldn't be applied to other commodities.

This kind of research will draw a good deal of attention to costs of rail movement. This attention will have its benefits in the operating department, as well as the traffic department.

All other major industries conduct market and cost research—(including competitor's costs and prices) with great profit. Most of them will tell you they couldn't get along without it. But this railroad market research goes beyond, even, that carried out in other industries—because these railroad projects are joint, carried out by regional cooperation.

There is, of course, a large field for market and cost research by individual railroads—a field not too thoroughly cultivated as yet, but it's coming. Much of the research can, however, profitably be done cooperatively by the railroads—eliminating needless duplication of effort and expense.

The year 1957—and, indeed, the entire post-war period—has witnessed no happening in the railroad industry likely to be of greater long-run value to it than the initiation of comprehensive analysis of markets and costs.

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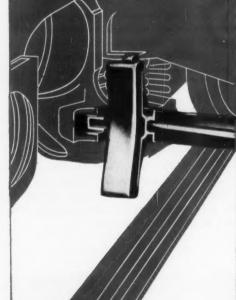
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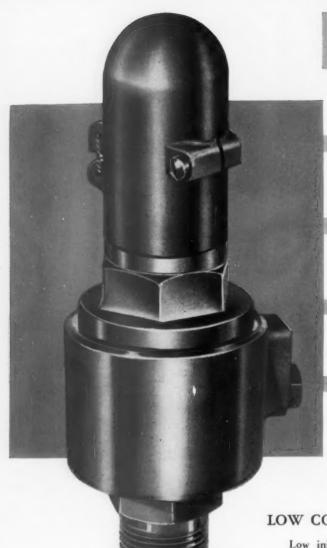
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By WALTER J. TAFT Washington Editor

I see the Senate hearings as the best break the railroads will get in the present session in Congress. They will use this opportunity to state their case well—but no important legislation is apt to result. If there is any, it will probably be of the tax-relief variety.

Senate Hearing Opens as . . .

# RRs Vie with Sputnik in Congress

The Senate hearing on the "deteriorating railroad situation" is generally expected to be the top Congressional development of interest to the railroads this year. As the hearing got started last week the railroads were making full use of the opportunity to put their story on the record.

Daniel P. Loomis, president of the AAR, opened a comprehensive presentation for the industry before the Surface Transportation Subcommittee of the Senate Committee on Interstate and Foreign Commerce.

#### Action in the White House

These sessions closely followed action at the other end of Pennsylvania Avenue—at the White House, where the railroads have been telling their story. A group of nine top rail executives went there last month for a conference with Administration officials headed by Sherman Adams, assistant to the President.

A return visit with hopes for an audience with President Eisenhower is expected.

There was no announcement on what was discussed at last month's White House meeting. But the industry leaders would naturally have emphasized the phases of the railroads' program on which the Executive branch of the government might help. Discussions on that basis might have ranged from user charges and the Treasury's attitude toward tax relief, to the Post Office's prolonged three-cent-air-mail "experiment" and government agency intervention to oppose railroad rate petitions before the ICC.

Railroad presentations to the Senate

subcommittee were expected to press again for several items they sought in vain last year plus a few more of priority nature:

- Freedom to operate other forms of transportation:
- Imposition of user charges on public facilities;
- Revision of the Interstate Commerce Act's definition of private carriage;
- Tightening of the act's so-called agricultural exemptions;
- Authority for the ICC to override state agencies on some abandonments.

#### Sputnik and Politics

Aside from the chance to be heard, though, the railroads can expect to get little out of Congress. Some proposals for tax relief might be enacted but the railroads' major objectives in the regulatory field—more rate-making freedom and the right to operate other modes of transport—are controversial.

They will be opposed by the ICC and fought by their competitors, especially the trucking industry.

Prospects for such legislation are further dimmed by Congressional preoccupation with defense. Sputnik made it certain that much attention will be given to defense legislation and spending. Besides, this is an election year, and the principal business of the session is sure to become politics. Especially so with Congress and the Administration controlled by opposing political parties.

#### What the RRs Got

Congress made something of a record for transport legislation last year, generally on non-controversial matters. Railroads got a change in the Fourth Section, permitting carriers with indirect routes between competitive points to meet charges of like carriers with more direct routes—without specific ICC authorization.

Other enactments of railroad interest included the amendment requiring the government to file Section 22 quotations with the ICC for publication. Also, the Section 20b amendment which added provisions under which controlled or controlling stockholders can vote on a railroad revamp plan. Another Congressional action raised the fines for railroad violations of the Safety Appliance, Hours of Service, and Locomotive Inspection acts.

#### What They Didn't Get

What the railroads didn't get was the cream at the top of their 1957 legislative program: repeal of the excise taxes on for-hire transportation, the rate-freedom proposal, and an undertaking to eliminate the adjustment for past accrued depreciation. This last was made some 15 years ago with conversion from retirement to depreciation accounting.

#### What They're After Now

Railroads and other transport agencies, backed by the ICC, shippers and other interests, have made a good case on Capitol Hill for repeal of the excise taxes. They've driven home the point that the 3% levy on freight charges is unfair.

But the revenue considerations are still to the fore. With defense spending on the upgrade, Congress is reluctant to cut off any source of money. If anything is done here, it will perhaps be on the one-one-one plan: repeal of the tax over three years, one per cent a year. There's no expectation the 10% tax on passenger fares will be changed.

Well-informed men entertain hope (somewhat fainter than on the tax relief proposals) that the private carriage definition will be toughened up and agricultural exemptions will be tightened up to offset the broadening effect of recent court decisions. But there's sure to be vigorous opposition on both counts.

The rate-freedom program and the bid for greater latitude to engage in other forms of transportation aren't viewed with much optimism at all, though.

President Eisenhower's Cabinet Committee fostered the rate-freedom program. It's designed to end the ICC's fair-share-of-the-traffic approach to rate cases by prohibiting consideration of the effect the proposed rates would have on other transport modes. Truckers and motor carriers have assailed this recommendation all along, and the commission has opposed it.

Such programs usually take several years to get through Congress—but many eventually do get passed. That was the case with repeal of the land-grant rates, and with the Bulwinkle Act which gave anti-trust immunity to carrier rate procedures approved by the ICC. The bid for freedom to offer non-railroad transport services seems to be in a similar setting. So it looks like a long pull.

The ICC could now give the railroads more competitive rate-making freedom. The commission doesn't seem so disposed—yet, positions have been known to shift.

The ability of one form of transportation to offer lower rates than others was recently held by the Supreme Court to be an "inherent advantage" that the commission must recognize. It may also be recalled that agitation for laws to assure prompt railroad rate increases as costs rose did not produce legislation—but the "time lag" in general rate cases has been pretty well eliminated by the ICC.

Non-rail service—Railroad entry into other fields of transport also was reviewed by the high court when it upheld the commission's grant of truck-operating rights to a Rock Island subsidiary without tie-to-rails restrictions.

The ICC had emphasized, however, that this case was an exception and did not abrogate the tie-to-rails policy. So any real easing of the restriction must await legislation—and it's possible the commission would join truckers in opposition. Some commissioners' statements indicate most of them prefer to see integrated transport develop via railroad-trucker through-route, joint-rate agreements.

Advice on this subject was voiced recently by Jervis Langdon, Jr., Baltimore & Ohio general counsel—an authority on rail-truck competition. He said:

"The temper of Congress has been against common control of competing forms of transportation, and this may be hard to change. But that does not bar integrated services. The principal concern of the railroads will be that they—and not the competing forms—provide those parts of the through service where rail service is more efficient. If the railroads can be adamant on this point, their future in a general integration of services would seem to be reasonably sure."

ICC authority to override state bodies in service-abandonment cases is now before the Supreme Court. The case involves discontinuance of a New Jersey & New York train and challenges the ICC's stand that it lacks power to override. Legislation on matters like this is traditionally opposed by the states—and Congressmen try to do what they can for the folks back home.

The Bureau of the Budget has asked the ICC and other federal agencies concerned with transport matters to prepare legislative proposals for user charges on public facilities. The proposals are due at the bureau February 1. But what a Democratic Congress will do with such an Administration program—if it's ever submitted—is conjectural.

Railroads will also seek—and may get—favorable action on a proposal to eliminate the capital write-off involved in the adjustment for past depreciation. The effect of the adjustment was to reduce by 30% the capital base for figuring depreciation on the property involved. Allowable depreciation charges are trimmed accordingly. The Bureau of Internal Revenue has indicated willingness to accept this proposal—giving it a good chance for Congressional adoption.

New tax-relief recommendations expected would permit the railroads to accumulate a construction reserve fund and fix a maximum depreciable life of 20 years for all railroad property. Amounts deposited in the reserve would be deductible in income tax computations.

The deposits would be used for such things as acquisition of rolling stock or other facilities or to reduce the debt incurred in such purchases. Unless used within five years, funds in the reserve would be taxable at the rate applicable to the year in which they were deposited. So, the railroads consider the idea a plan of tax deferral—not forgiveness.

The 20-year-life plan would reduce the disparity in depreciation rates between the railroads and their competitors. Proponents point out that air and highway carriers depreciate equipment in five to eight years.

#### What RRs Will Fight

What the railroads will oppose in Congress will be legislation threatening to increase their costs or otherwise cramp their style. That would include bills to liberalize benefit provisions of the Railroad Retirement and Railroad Unemployment Insurance acts. Also, the ICC's bid for authority to make rules for inspection, test and maintenance of air brakes.

The commission's annual report repeated this request along with its penalty per diem proposal—on which the railroads are divided.

An alternative to the per diem proposal was included in the report. It suggests that instead of getting penalty per diem powers, the commission be authorized to consider the "earning power or value of the use of the vehicle lost to the owner when used or appropriated by others."

The commission also repeated 14 of 1957's other recommendations on which Congress took no action. The carryovers are more controversial than the nine items on which Congress did act last year.

Three new proposals are contained in this year's report:

- Amendment of the Safety Appliance Acts to exempt track motor cars and authorize the commission to prescribe appliances and rules for such cars—a result of the Supreme Court ruling that a track motor car and a push truck coupled together are covered by the Appliance Acts.
- Amendment of the Elkins Act to plug loopholes opened by court decisions; and to apply treble-damage forfeiture provisions to railroads as well as shippers.
- Make gross operating revenue, instead of the number of vehicles owned or operated, the basis for determining whether a proposed unification of motor carriers is an exempt transaction.

There is only one real and permanent salvation for the American railroad industry. That is for the government to join the rising tide of public opinion in recognizing that railroads must be allowed to earn their way as a self-supporting, free-enterprise service to the public, to the economy, and to the national safety. Once that is done, provided it is done soon, there will be no more "railroad problem". . . There must be a moratorium on legislation which would add to the burdens of cost and regulatory inequities now borne by the railroads.—James M. Symes, PRR president, on "the deteriorating railroad situation".

#### ENGINEER'S FIELD REPORT

PRODUCT CHEVRON FILTER COAT

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# Air filter firm uses Chevron coating exclusively



Farr Co. supplies impingement-type air filters, oiled with Chevron Filter Coat, to nearly all major railroads. A leader in air filtering, Farr has used Chevron Filter Coat (formerly Calol) exclusively for three years, since product was introduced.

Farr's Director of Research, S.F. Duncan, recommends gel-structure oils like Chevron Filter Coat because they improve filter efficiency. Other users report Chevron Filter Coat increases filtering efficiency as much as 50% over oils they previously used.

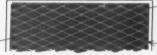
A heated centrifugal oiler of their own design (above) applies Chevron Filter Coat to all Far-Air filters just before they are packed for shipment. Filters are immersed in heated oil for 30 seconds, then raised and spun at 300 rpm for a minute to remove excess oil.



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# Armco Steel Building Replaces Obsolete Freight House

Armco Steel Buildings are used by practically all major American railroads. More than 5,000 standard sizes make it easy to select the exact building for almost any job.

A 24' x 88' Armco Steel Building was erected at Washington Court House, Ohio, for the Detroit, Toledo and Ironton to replace an old timber structure. The new building provides a modern freight room and offices finished in knotty pine.



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#### Structure Helps Control Flood Waters

Armco Liner Plates provide an efficient, low-cost way to obtain openings without interference to service.

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#### Armco MULTI-PLATE Pipe Saves Failing Masonry Structure

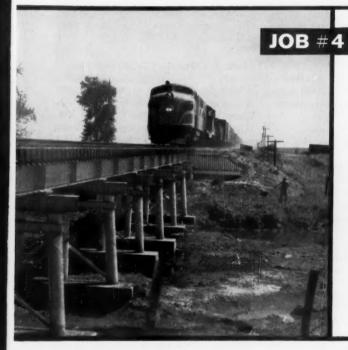
With Armco Corrugated Metal Structures it is often possible to renew failing masonry openings. And you save traffic interruptions as well as the time and cost of complete replacement.

Here a crew for the Chesapeake & Ohio threads 160 feet of Armco MULTI-PLATE® Pipe through an old arch near Greenup, Kentucky. Installed in 1947, the structure is still in excellent condition.

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Rugged Armco Pipe Piles save time, trouble and money now and later. Installed costs are low, Maintenance is held to a minimum because there's nothing to crack, warp, rot or burn.

The modern Toledo, Peoria & Western trestle near Fairbury, Illinois, features 3-pile bents and steel caps to provide an E-72 loading. Design of an all-steel structure resulted from a complete study, including a comparison of maintenance costs on steel bridges and timber structures.

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ARMCO DRAINAGE & METAL PRODUCTS INC.

# RR Signaling Will Pay Its Way

- The annual saving on one CTC installation is \$4,435 a mile
- The C&NW saves 59% a year through a \$3.6 million crossing project
- Each 24-hour position cut with automatic retarders saves \$25,900 pay

The basic reason why construction will continue at a high level in 1958 is that modern signal systems improve train and yard operations and reduce operating expenses by: (1) securing more efficient use of locomotives; (2) removing main tracks that are needed; and (3) eliminating numerous levermen, telegraph operators, crossing watchmen and retarder operators.

Any reduction in traffic in 1958 should be an incentive for more of those signal projects which eliminate operating expenses for wages in positions that are not reduced by less traffic. For this reason, whether traffic is good or bad, signal construction should continue in good volume.

Wages for one leverman on duty three tricks every day, based on a 40-hour week, including paid holidays, vacation, retirement, insurance, etc., range from \$21,066 to \$23,500 annually depending on local circumstances. On the same basis, wages for a crossing gateman on duty round the clock every day, at a single crossing, range from \$17,225 to \$19,500 annually.

During 1957, about 2,017 track miles of new CTC were installed. This compares with an average of 1,616 miles a year in the 1947-1956 decade.

One road, which removed a section of second main track and installed CTC on the remaining single track has carefully figured all costs for rail, ties and ballast, the answer being that the annual saving as applying to track only, averages \$4,435 per mile every year from now on. This figure would increase as wages and costs of materials increase.

Those roads which have limited ready

cash, and an acceptable credit rating can arrange with signal manufacturers to furnish equipment for certain projects on conditional sales agreements. This method of financing is much the same as used by railroads for the purchase of cars and locomotives. It permits railroads to obtain the operating savings of signal installations promptly. The savings, in most instances, should more than offset the monthly payments to the signal equipment manufacturers.

#### Fewer Interlocking Levermen

In many instances, automatic controls can be installed at interlockings, thus dispensing with levermen. In layouts where trains approaching on any given track always follow the same route, automatic controls are readily applied. For selective routing, two roads in the United States have installed automatic electronic train identification systems for automatic control of interlockings.

Programmed interlocking control has been installed recently on the London Transport lines in England. Holes punched in a paper scroll, similar to that used on a player piano, automatically control switches and signals for each train when it approaches.

In layouts where automatic control is not practicable, thought should be given to consolidation of the control of two or more interlockings. For example, in 1957 the New Haven completed an extensive three-year project including the consolidation of nine interlockings. The previous

interlockings required 33 tower operator tricks, which equal 46 full-time positions, not allowing for vacation time. The change to consolidated control reduced this to nine tower operator tricks which are 12 positions. (Railway Age, Feb. 27, '56, p. 26)

#### Fewer Tracks, More Signaling

With diesel locomotives, trains are fewer and operate at higher average speeds. Therefore track occupancy time is less. With the same gross ton-miles, fewer main tracks can now suffice on extended mileages. When one track is removed, the installation of CTC on the single track provides capacity for present day traffic. This has been done in recent years on extended sections of the Milwaukee, the GTW, the Erie, the Southern, and the Wabash. On the NYC this change was made on 125 miles in 1957. For 1958 this change is planned for more than 300 miles on the NYC, about 300 miles on the Pennsylvania, 170 miles on the C&NW, over 300 miles on the Milwaukee, and on four sections of the B&M totaling over 200 miles.

An important factor, when planning CTC on single track, is to locate the sidings on a time-distance basis, as on the Southern Pacific. Also, the sidings should be 9,000 ft or longer to permit trains to meet without either being required to stop. High-speed turnouts and signals to tell enginemen how to enter and leave sidings at maximum safe speed are factors that save precious minutes and eliminate train stops.

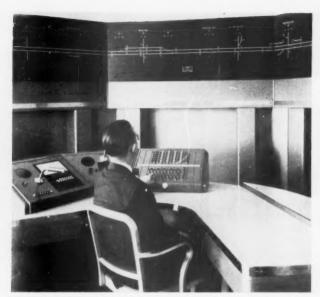
I look for signal construction to continue at a high level during 1958, and for five years or more beyond that. By high level I mean an average of 7,000 to 7,500 units. The total for 1957 was about 7,549 which is less than 1956 but more than the 7,227 average for 1954-1957.



JOHN H. DUNN Signaling Editor



SEMI-CIRCULAR MONITOR PANEL for automatic retarder yard, first used in 1957, concentrates information and buttons.



COMPACT CTC CONTROL MACHINE, first installed on NYC in 1957, enables one man to control trains 200-300 miles away.

An important trend today is to install CTC for train operation both ways on each of two main tracks, just like two single tracks side by side. Power crossovers are located about 10 miles apart, so that fast trains can run around slower ones, and all trains keep moving. Total capacity is thereby increased. This has been done successfully on extended sections of the Santa Fe, Rock Island, North Western, Missouri Pacific, Frisco, Union Pacific, and Chesapeake & Ohio.

Using this method, the NYC has cut three-track and four-track back to two-track on several hundred miles—Buffalo to Cleveland, Toledo to Elkhart, and Syracuse to Buffalo. More than 85 trains daily are operated on some of these sections. On 35 miles of the Burlington, between Chicago and Aurora, all three main tracks are signaled both ways.

#### For Light Traffic Too

Up to now, centralized traffic control has been installed on about 22,000 miles of single track, most of it classed as important, heavy-traffic through routes. CTC is the conventional type, including power switch machines and complete arrangements of dispatcher-controlled signals at both ends of sidings. Railroads will continue to install this type of CTC on heavy-traffic single-track lines.

In addition, there is a demand for "modified" CTC on nearly 35,000 miles. This includes about 10,000 miles not previously signaled and 25,000 miles where existing automatic block can profitably be replaced with CTC. The problem is to modify the signaling and sidings so CTC

can be justified by traffic volume and reduction in operating expenses.

Modified CTC was installed in 1957 on 63 miles of single track on the Burlington, making a total of 500 miles. Canadian National and Boston & Maine have projects under way or planned.

#### **More Compact Machines**

1957 was noted for "break-through" in the development of a compact CTC machine. In conventional machines, an illuminated track diagram extends across the panel. One row of levers controls the switches, and the other controls signals. Thus the number of levers was a factor in determining the length of the panel. For a long territory of 250 to 300 miles, two or more panels 5 to 7 ft long were set at angles partly enclosing the dispatcher's work area.

To concentrate the controls for extended CTC mileage (200 to 300 miles) on a machine not more than 20 inches wide, a new idea was developed.

The first control machine of this type, installed in 1957 on the NYC at Toledo, controls switches and signals on 133 miles of double track. Dispatcher manipulates the machine from a stationary position.

This compactness is attained by: (1) removing the illuminated track diagram including all indications from the control machine. These indications are placed on a separate large-size illuminated track diagram on pedestals 5 ft above the floor and about 8 ft from the dispatcher's console. Successful accomplishment of this objective led to the second new practice: (2) use of one set of push buttons to control

the switches and signals at any of the 18 layouts on the 133 miles. Thus, controls are concentrated on a panel 14 in. by 20 in

#### Yard Construction Increases

Eight new gravity classification yards, all including automatic retarder and switch controls, were completed in 1957. At least four more are under construction or planned for 1958. Also, big savings can be made by adding automatic controls in many of the 40 manual-control yards which were built prior to the development of automatic controls.

In a yard with 40 to 48 tracks, using manual control, a typical arrangement includes three towers for control of power switches and retarders; requires nine operators on duty 'round the clock. Yards with 75 to 80 tracks may require four towers.

With the addition of complete automatic control, only one tower, with only one man, a monitor operator, is required. The annual wage saving for one retarder operator position 'round the clock every day including vacations, pensions, etc., totals about \$25,900. If six positions can be eliminated in a yard by installing automatic controls, wage costs can be reduced \$51,800 annually.

Immense reductions in damage to cars and lading can also be achieved by installing automatic control.

In 1956 Rock Island added automatic controls in its Silvis, Ill., yard. The RF&P plans to install automatic controls in Potomac yard at Alexandria, Va.

MORE >

Further improvements are being made in equipment for automatic controls in classification yards. Adaptation of higher frequency radar for more accurate measurement of car speeds in the low speed ranges; use of high-speed electronic analog computers; and improvement in other measuring devices, have characterized the 1957 progress in yard automation.

#### **Better Yard Automation**

The trend toward yard automation is continuing—practically all new yards authorized during 1957 had new automatic features. All are designed to meet the demand for better and faster car handling. The object of automatic retarder control is to substitute accurately computed factors for the judgment of retarder operators who had only the car weight and their visual appraisal of the car as it moved toward them, to guide their retardation decisions.

The principal measurements of car characteristics and performance fed into the computer to determine the speed at which the car or cut is to be released are: relative weight, rollability on tangent, rollability on curve, length of cut, characteristic of route and destination track fullness. These factors are fed into the electronic analog computer at the proper time, and result in automatic operation of the retarder to achieve the desired coupling speed or distance of car travel beyond the last retarder. The computer is self-checking and gives warning at once if it is not operating properly.

Some yards completed in 1957 include programmed automatic switch control in which the switch list is punched in paper tape, the same as for printing telegraph. As cars go over the hump, the tape feeds through a telegraph printing transceiver which initiates control for the switches. A further advance, to go in service soon, uses magnetic memory cores, rather than tape. These memory cores are the same as used in Tele-register electronic ticket reservation systems.

#### Far End Retarders

To stop the first car at the far end of each classification track, two methods have been used. One used track skates. The other had a field man board the car and apply the brakes. Both required communication and understanding between tower men and those at the departure end. Even so, cars sometimes went too far.

To correct this "missing link", some railroads are now installing a short retarder near the departure end of each classification track. Such a retarder is set normally so that any car approaching at yard speed will be stopped within the length of the retarder.



HEAT-RAY HOTBOX DETECTOR with an electronic control, installed in 1957, has proved its efficiency on five railroads.

In yards which handle a wide variation of commodities and types of cars in all kinds of weather and variations of temperature, there may be instances in which cars, "played for the safe side" will stop short on classification tracks.

#### Robot Car Pusher

Two roads have solved this problem. A machine, which operates on standard gage track, is power operated by electric motors fed by storage batteries carried on the machine. Normally this machine can be parked on a special spur just below the hump. The machine is remotely controlled by inductive carrier or by radio from a panel in the tower.

When trimming is required, the special "robot" is controlled remotely to run down the yard to push the car on its classification track. Then the machine is returned to its parking track. The robot is used only for pushing cars—it has no coupler. The device has been in service in one yard for a year or more, and is being installed in a yard on the New York Central at Elkhart, Ind.

#### Safety Detectors in '58

Ten forms of automatic apparatus at numerous road and yard locations are being used to detect hazardous track and bridge conditions, as well as defects on passing cars and locomotives. And they can control signals to stop trains.

From now on there will be increasing need for these automatic safety detectors, not only because they are much more effective than depending on train crews and men along the wayside to spot the trouble, but also because fewer men are now working on the wayside.

Infra-red ray bolometers have been used for several years to measure temperatures of objects several feet away; in steel mills, for example. When applying such a bolometer to check for hot journal boxes on passing freight cars, the important problem was to develop a "shut-

ter" that would confine the "viewing" to each journal box only.

In 1957, a manufacturer working with the cooperation of the C&O, N&W and Reading developed an infra-red ray bolometer hot-box detector. It uses inert magnetic devices to control electronic amplification for "shutter" control and has no moving parts (Railway Age, Apr. 1, '57, p. 47). One installation detected 52 hot boxes in five months.

A device to detect broken flanges on car wheels has been under development and test for several years on four railroads. In 1957 this device was installed on two more roads, and shipments have been made for installation on two more.

A set of these detectors installed on the NP September 5, has detected broken wheel flanges as follows: One 5-in.; five 8-in.; one 10-in.; one 22-in.; and one wheel with 3 in. gone and a 36-in. crack in the flange.

Devices to detect defective equipment hanging or dragging from trains have proven their worth on a dozen or more roads during the past 20 years. Other devices to detect roadway hazards such as floods, rock slides, earthquakes, falling snow and freezing rain were developed years ago and are in service on numerous roads (Railway Age, Nov. 25, '57, p. 20).

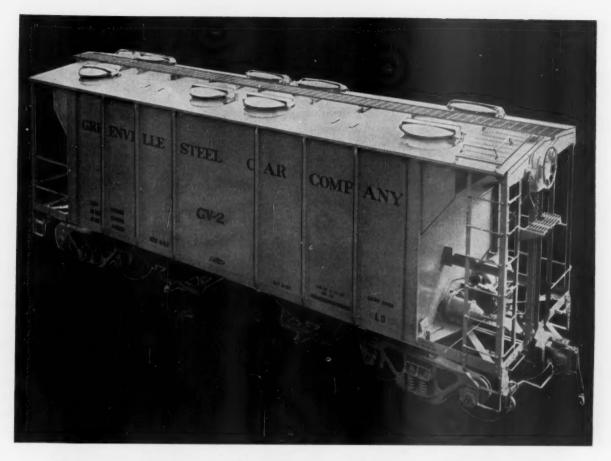
#### **More Crossing Protection**

Modern crossing gates with flashinglight signals, controlled automatically, provide improved protection round the clock. Therefore this form of protection is being installed at many grade crossings to replace manually-controlled gates or watchmen. The savings in wages will pay for the change to power gates with automatic control within two years, in many instances.

New flashing-light signals or gates were installed at 1,630 crossings in 1957, an increase of 17 per cent above the 1951-1956 average.

The Chicago & North Western now has a special program under way, including changes and improvements in protection at 330 crossings, involving an expenditure of \$3.6 million by the railroad, the savings being about 59 per cent each year. This will be more as wages increase. The practicability of changing from manual to automatic control has, at many locations, been made possible by applications of new ideas in control schemes. Their objective is to minimize delay to highway traffic when no train move or switching move is imminent.

Thus, in all its phases, signaling on railroads is never static, but must be changed and replaced to secure the advantages of reduced operating expenses and more efficient use of cars, locomotives and tracks.



# Greenville adds 70-ton Covered Hopper to Package Car Line

This new, 70-ton covered hopper car is one of four package cars now available from Greenville. It can be delivered to you in less time and at lower initial cost than any similar car. Sides, top, and hatches are automatically welded. Other welds—all made in the down-hand position—keep this car in service longer and greatly reduce your maintenance and operating costs.

The new car is available with 2,003-or 2,893-cubic-feet capacity. It loads fast—carries potash, cement, and similar materials "high and dry". It is weathertight.

All components meet AAR specifications. The design is

flexible, and minor modifications required to meet your specific needs or standards can be made without difficulty.

Initial orders have been delivered to: The Nickel Plate, Delaware & Hudson, Lehigh and New England, Tennessee Central, North American Car Corp., Erie, G.M. & O., and the Western Maryland. Other orders are in process and Greenville is preparing for production runs beginning in the first quarter of 1958.

Get the facts on this newest Greenville car today. Ask for Circular GV-2. It gives complete specifications, shows the car, and lists important construction and mechanical features.



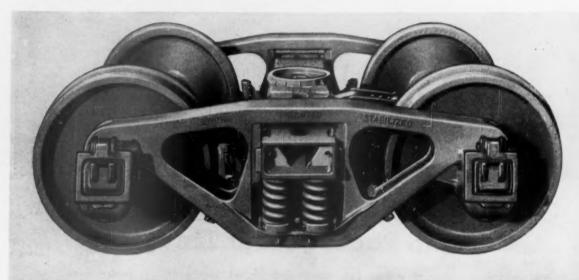


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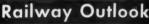
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Standard Car Truck Company, 332 South Michigan Avenue, Chicago 4, Illinois. *In Canada*: Consolidated Equipment Company, Ltd., Montreal 2, Quebec.



Re-equipped systems speed car reports. Stepped-up radio usage makes train and yard contacts easier, surer. Microwave outlook brightens with favorable FCC attitude encouraging new projects.



# **New Ideas Spur RR Communications**

#### Progress in Car Reporting

Two roads made car reporting news in 1957: the Chesapeake & Ohio, with a system-wide car reporting network; and the Union Pacific with a complete switch to transceiver operations.

The C&O network went into service in May (Railway Age, June 17, '57, page 56). Printer equipment at major yards feeds car movement information into a Car Location Information Center at Huntington, W. Va. Here the information is sorted and reports on cars are sent via printing telegraph to C&O traffic offices. Within two hours after a car has entered or left one of the reporting yards, traffic offices have a report on the car's movement.

The Union Pacific is changing over its system-wide car reporting from punch card and printer operation to all punch card operation, using transceivers. The system will be completed in 1958. Printer circuit operation will link yard offices and

the transportation department in Omaha.

The Milwaukee Road and the North Western expanded their car reporting systems (punch cards and printer) to tie in with the Union Pacific at Council Bluffs, Iowa. With the UP-SP combination, they provide information on cars moving between Chicago and the West Coast.

Car reporting systems will be expanded during 1958, an example being the B&O, which should complete its system-wide network. Extensive carrier equipment has been installed, and more should be installed during 1958 to provide circuits for these systems.

#### Radio Keeps Growing

Railroad radio just "keeps on rolling" like the Mississippi. Installations in 1957 topped any previous year, and should continue high through 1958. This results not only from long-time users filling in the gaps in their systems, but also from the fact that several roads really "jumped in

with both feet." Among these are the MKT, D&H and the ACL.

Another reason for the higher figures is the replacement of equipment by some of the earlier users. One of the biggest gains was chalked up by walkie-talkies. Many roads are putting them on locomotives and cabooses in addition to the regular radio.

Another large use of walkie-talkies is for car inspectors' systems. One of the pioneers in this use, the Union Pacific (Railway Age, Feb. 4, '57, p. 34) is now joined by the New York Central, P&LE and the B&M. The former two installed three systems apiece in 1957, and the B&M put in one system at Mechanicville, N.Y. These car inspectors' radio systems accounted for the large gains in yard radio installations during 1957.

The maintenance-of-way departments of many roads have been making extensive use of radio, pioneers being the Southern, SP, DT&I, CofG, Clinchfield and Erie. During 1957, the CofG equipped a bridge



GRABBING CAR NUMBERS by use of television speeds operations in modern yards.



ON THE GROUND contacts are maintained with devices like this "Dick Tracy" transmitter.

gang with radio. When repairing a trestle, they set up a portable base station at the site for communication with approaching trains. The foreman carries a packset to talk to this base station, and to trains.

The trend in putting two-way radio in automobiles, trucks and jeeps continues. The Missouri Pacific put radio on 14 trucks used in pick-up and delivery service in Memphis, a practice that the UP and the Burlington have followed for several years.

The biggest news in developments from the manufacturers is the transistor power supply for locomotive radio. Now this radio can operate directly from the 64-volt d.c. supply, without vibrators or rotary converter equipment. Further transistorization is leading to lighter weight equipment.

On the government front, the FCC is going to look into the whole radio spectrum from 25 mc to 890 mc. Opinion is that the FCC will probably not make any major policy changes. The railroads can expect to maintain or even increase, their radio space as a result of channel splitting.

#### **Loudspeakers Make Gains**

With eight new retarder classification yards going into service during 1957, yard loudspeaker systems made gains over the previous year. Three more retarder yards are under construction, and new systems are going into old yards, so the high activity in this field should continue.

A unique variation in talk-back speaker operation was installed by the New York Central at the new Buffalo yard (Railway Age, Mar. 18, '57, p. 28). A man in the classification yard can call any of five offices, such as yardmaster or lead car inspector, by simply pressing the speaker signaling button a required number of times.

Centralized checking systems in freight-houses accounted for some of the gains in communications growth in 1957. At the P&LE freighthouse in Pittsburgh, the foreman carries a small radio transmitter which he can use to "get in" on the house paging speaker system. Freighthouse checking systems will keep pace because of a resulting reduction in the operating forces. One road's system paid for itself in eight months.

#### **Television Gains Too**

Further applications of closed-circuit television were made on the railroads in 1957, and more uses are "in the wind" for 1958. One growing demand for closed-circuit TV is to "grab" car numbers. Such a system was installed by the L&N (Railway Age, Oct. 21, '57, p. 26), and the NYC's Elkhart yard will include TV for car checking.

A complete system of TV has been installed in one big railroad's yard. Ten TV cameras at four entrances to this yard are connected by cable to conventional TV viewing sets in the yard office. The incoming circuit from any of the cameras at yard entrances can be connected in the office to a special enclosed machine where a "movie" film is produced for later reading of car numbers. If two trains are arriving simultaneously, the motion-picture machine is used to record one train, while the clerk watches a TV screen for the other train.

Another new feature of this project is a "switching center" in the clerk's office by means of which he can switch cameras and control the lighting at the various yard entrances. Closed-circuit television systems are due to be installed in at least six other yards in 1958.

A new and different use was made of TV by the Jersey Central at its Pier 18 coal dumping facilities in Jersey City (Railway Age, Sept. 30, '57, p. 18). The TV camera is focused on the barney pit and enables the operator to see that the barney is properly positioned to push a loaded car up to the dumping platform on the dock.

The largest closed-circuit TV installation on American railroads is in the Pennsylvania's ticket sales and service bureau at Penn Station, New York. Using 100 cam-



ROBERT W. McKNIGHT Communications Editor

As I see it, there will be continued high activity in the communications field as railroads upgrade existing plant and install new facilities. Last year was the best ever with a record-breaking 8,445 communications equipment units installed, the highest reported to our Railway Age survey. Increased pressure for faster communications makes it look like 1958 will be even busier. I expect over 7,000 units to be installed in each of the next ten years.

eras and 96 receivers, it went into operation this year (Railway Age, Mar. 4, '57, p. 35).

Another proposed use for closed-circuit TV is in grade crossing protection. Where tracks cross several busy streets at grade installation of power gates, control by one man in a central tower might be opposed because of limited visibility. Use of one or two cameras at each crossing with viewer sets in a central control tower looks like a possible solution.

Although many roads continue to plan for TV, no one has quite come up with the "forward look" of A. W. Schroeder, president of the Minneapolis & St. Louis. In a recent speech, Mr. Schroeder said that his road is studying the possibility of stringing coaxial cable along its entire line, not only for communications, but to provide for television in yards or key points. The idea is to permit dispatchers to follow progress of trains more carefully, and centralize the direction of all yard operations under a single general yardmaster at one point.

Because illumination for TV in yards and other places is a problem, a new Lumicon TV system holds promise. It can provide good quality pictures with available light levels as low as one-half foot-candle, compared to present requirements of about five foot-candles.

#### Microwave Outlook Is Bright

Main reason for the optimistic outlook for microwave in 1958 and future years is that the railroads now feel free to go ahead with extensive installations. This feeling stems from the 1957 Federal Communications Commission's hearings on the allocations of frequencies above 890 mc. The biggest piece of good news for the railroads was the testimony of AT&T witnesses who said that they did not oppose

the right of the railroads, pipelines and other "right-of-way" companies to have private point-to-point microwave systems. The FCC has not issued its decision yet, but the best informed opinion is that no major changes are to be made in the present practices of licensing policy, particularly with reference to the railroads.

During 1957, the Santa Fe installed microwave instead of a pole line to provide communications to the end of a new branch line in California (Railway Age, Oct. 21, '57, p. 21). Part of this system runs 29.5 miles, San Bernardino to Victorville, which may become part of a mainline microwave system between Los Angeles and Barstow. Eventually this will be extended to form a Chicago-Los Angeles microwave system. The Pacific Great Eastern is now testing a microwave system that stretches 640 miles from Clinton to Fort St. John, B.C.

In 1958, you may see the installation of two microwave systems: the Santa Fe is now installing a 60-mile system between Kansas City and Topeka; and the Rock Island has made route surveys for a 380-mile system between Herington, Kan., and Des Moines, Ia. Other roads are in the planning stages for microwave, and you can expect to see one or two, or possibly more, microwave systems installed on the railroads each year for several years to come.

The economic and service advantages of automatic dial telephones for local and long-distance calling are the main reasons for their continued growth on the railroads. The Southern Pacific has just about completed its system-wide direct dialing. The Union Pacific, Northern Pacific and Atlantic Coast Line are extending initial installations. Here again, extensive carrier installations were made in 1957 (over 850 channel terminals and over 150 voice repeaters). The activity should continue in

future years, to provide long-distance voice circuits.

Many roads are installing automatic exchanges and dial phones in new or rebuilt yards. Examples are the Hills Park yard on the L&N, and the new Memphis yard on the Frisco (Railway Age, Oct. 28, '57, p. 28).

One new device cuts in telephone equipment to automatically dial an office. A pre-recorded message is sent to the person answering, and is repeated several times. If the line is busy, or no one answers, the equipment will try again after a preset time interval.

#### Pole Line Construction Steady

Although pole line construction was slightly below the previous year, 1957 saw the number of miles of aluminum wire increase some 2,000 over that used in 1956. The Canadian National was the leader, having installed 4,612 miles of aluminum wire for long-distance circuits.

A test of aluminum pole line hardware is being conducted on the Pennsylvania in northern Indiana, in a heavy industrial area of steel mils, chemical plants and oil refineries, to ascertain aluminum's resistance to a corrosive atmosphere.

Some of the drudgery has been taken out of pole line maintenance work by a new machine developed on the Reading. A tractor, equipped with an air compressor for powering of tools, has eliminated much of the hand work required in attaching crossarms and hardware and setting poles.

Pole line construction will probably hold at about five to seven thousand miles of new or rebuilt pole lines annually, for the next several years. With the increasing use of carrier, the pole lines are more important than ever, and good construction practices will pay dividends in the long run.

























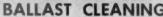












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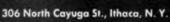
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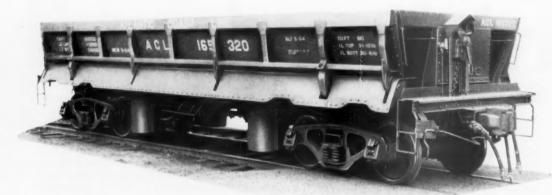
maintenance of way operations



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Whether it's snow removal or construction work, MAGOR automatic air dump cars offer unsurpassed dependability combined with a new low in maintenance costs.

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H. C. WILCOX Mechanical Editor

Looking ahead into 1958 there is the possibility that we may see a forward step in the development of hydraulic drives for motive power; and there's a possibility of a fuel from a new source with a price differential sufficiently attractive to warrant its use and with characteristics that would make it more desirable from a maintenance standpoint. I predict that 1958 definitely will not see any further experimentation in the field of steam power.

## New Look At Fuel, Power Trends

The year 1957 has a definite landmark with respect to motive power on American railroads. Regardless of the fact that there are a few steam locomotives left, one important event occurred. This was brought about, unfortunately, by a decline in traffic.

The event was that, for the first time since dieselization of American railroads, stored locomotives became a factor. The statistics show that on December 1, 1957, there were 278 units of diesel-electric motive power stored by the Class I roads.

These 278 units, while representing an insignificant percentage of the 26,254 diesel-electric units owned, have a dual significance. They represent the diesel units not required under a declining traffic volume at the end of the year. They also represent that margin of motive-power availability, from the ownership standpoint, that makes it unnecessary under such conditions to operate steam power on most roads any longer.

Unfortunately, a surplus of power represented by stored diesel units also has an adverse effect upon the volume of new locomotives ordered for domestic service. Some indication of this can be seen in the backlog of locomotive orders which, on January 1, 1957, stood at 810 and declined to 488 as of December 1.

It is also of some significance to note that, of the total diesel unit ownership, the number out of service for repairs on November 1 practically the same as it was at the beginning of 1957. Usually, in times of declining business and unsatisfactory revenues, there is a temptation to pile up deferred maintenance. This apparently is not being done.

This is borne out by the currently released annual report of the ICC Bureau of Locomotive Inspection which shows that with a greatly increased number of locomotives inspected, the general condition of power is showing a definite improvement. The last year, of record, is the first year, in many, that there were no casualties as a result of locomotive defects. This, definitely, is a positive sign of improvement.

Sometimes in attempting to answer a current question, it pays to look back. One year ago concerning economy fuel we said:

1. Everyone would prefer to use the highest grade fuel available in his diesel engines, and, all other things being equal, there would be no argument as to what type of fuel should be used. However, we must weigh the relative overall economics against the type of fuel we use. If we can find fuels that can be utilized satisfactorily and are less critical in nature, and which do not extend our maintenance problems to a point that we can not live with them we may be able to accomplish an overall economic balance in favor of the use of use of such less critical fuels.

2. At the present stage of the efforts to find a lower price fuel, it would be extremely unwise to suggest that there are any definite conclusions to be arrived at. There are so many varying and unknown factors involved in this whole subject, particularly from a standpoint of economics, the chances are that conclusions arrived at today might prove to be unsound a year from now.

3. One thing is certain: with the price of diesel fuel increasing all the time, more intensive efforts will be made by the railroads to find a way to reduce overall fuel expense.

In the past year railroad men have had enough experience with economy fuels to be realistic about their relationship to maintenance costs. This is a good idea. There is however a bright spot—the possibility of a new fuel source with a favorable price differential and not so many unfavorable qualities from a maintenance standpoint.

#### Looking to the Future

Now that the steam locomotive has virtually passed out of the picture, dieselelectric power has taken over the job of moving today's traffic.

There are many who feel that some time in the near future there is going to come into the motive-power picture an entirely new form of power. What will it be? Will it be the gas turbine, or will it be the atomic powered locomotive? The gas-turbine locomotive is an actuality; it is not new. It has been in service for several years and, like all other major developments in the railroad field, it is now acquiring a service record that will enable us to appraise its real value in the near future. It has many advantages, but it does have some definite disadvantages that may slow up its universal adoption.

One of the important motive-power experiments on which a lot of work has been done and a lot of money has been spent in the last 20 years is that of the steamturbine-electric locomotive. It is not necessary here to review what has been done along this line, first by the Union Pacific, then by the Chesapeake & Ohio, and finally by the Norfolk & Western. Whether the year 1957 marks the definite end of experimentation with steam-turbine-electric locomotives cannot be said with finality, because new fuels, new materials, and new developments, today unseen, may

alter the economic possibilities of this type of power. The end of the present chapter with respect to steam-turbine-electric is reported by a current news release of the N&W which says: "Norfolk & Western experimental locomotive 200, known as "Big Jawn" and "Jawn Henry," has been permanently retired. Railroad mechanical men said maintenance costs of the 4,500hp coal-fired steam-turbine-electric had become prohibitive, even though it burned some 30 per cent less coal than conventional locomotives. They said the principle of using coal as a fuel in such an engine was proved, regardless of component deficiencies

"Experience gained from close and con-

tinued performance study led to the belief that a more economical and dependable coal-burning steam-turbine locomotive could be designed and built. . ."

#### **Atomic Development Lags**

How about the atomic powered locomotive? Probably one of the best answers to the immediate future of atomic power in the rail transportation field was provided by Dr. O. M. Solandt, vice-president, Canadian National, who said at a recent Canadian meeting:

"The most popular question in this field is 'When will we have atomic locomotives?' Frankly, I don't think that I will live to see them if development continues along existing lines. At the present time the nuclear reactor is merely a substitute for the fire and the firebox in a steam locomotive. In addition, the nuclear fire causes severe radiation hazards. The evolution of a fusion, rather than a fission, reactor would greatly reduce the radiation problems. The discovery of a method of converting nuclear energy directly into electricity would provide an even more elegant solution to the problem.

"However, until some such technological break-through occurs, you have to take the nuclear fire and firebox and add a boiler, a steam turbine, and some form of transmission."



A. G. OEHLER

A three-ply prediction: 1. I expect to see better utilization of diesel-electric locomotives in 1958...but...2. Sooner or later, railroads are going to take a new lock at straight electrification . . . meanwhile . . . 3. New developments hold great promise in improving rail adhesion and detecting wheel slip.

## Can Electrification Pay for You?

Looking beyond just the year ahead, it seems quite obvious that railroad electrification has a future. Longer locomotive life, as compared to the diesel, and lower maintenance costs, will make it increasingly attractive where power can be purchased. Performance characteristics of diesels and rising diesel fuel costs will also have their affects.

A chart to show any railroad operator how to determine his approximate potential return from an investment in electrification will be published in Railway Age soon.

Much of the cost of an electrification project can be saved by foresighted planning. This is particularly so in the matter of signal work. If circumstances indicate that electrification may be a possibility, the railroad should plan its future signal changes to allow for the needs of an electrified system.

Current activity makes it appear that

much will be done in the near future to improve adhesion between wheel and rail. One reason for this is that changes in journal box lubrication have aggravated the wheel-slip situation because more oil drips onto track.

Recent developments and experiments offer possibilities in ways to improve adhesion and detect slip.

Sand is still effective in getting a locomotive to deliver its rated horsepower but it's expensive and has other shortcomings. One medium-size railroad pays \$500,000 a year to sand the rails—then spends that much again to clean it out of ballast.

#### **Future Adhesion Efforts**

A slippery rail is most often caused by a little oil or grease and light moisture. New anti-lubricants have been developed to destroy slippery rail film but at this stage they must be applied ahead of a train for an effective performance.

From these facts, it is natural to expect rail treatment to be used on sections of track where adhesion is notably bad—usually on heavy grades. Efforts will be continued to develop effective ways to apply the treatment from the rear of trains to help those following.

Experimentation to find ways to apply new treating compounds on or just ahead of locomotives will continue.

A complication is that the individual drive of diesel axles permits single pairs of wheels to slip. When an axle driven by a series-connected motor slips, it quickly appropriates most of the power in its circuit and leaves its twin with none.

Awareness of this will give rise to the use, if not of parallel connections, then of balancing connections with at least part of the advantage of parallel motors. Brake control of wheel slip as used abroad could then become effective.



Western Pacific's Las Plumas Speeds Bay Area Car Transfer (Prints of this painting suitable for framing available on request)

#### MODERN WESTERN SERVICE PROVES STAMINA OF STANDARDIZED FREIGHT CARS

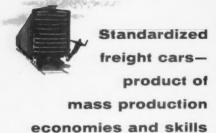
The enviable Western Pacific level of shipper service copes with rugged "out-west" climate and geography problems as a matter of course. And its fleet of P-S Standardized Freight Cars lets the W.P. take searing heat, rugged mountains and freezing cold. Even the sea is no problem for the W.P. with its new \$1,300,000 diesel-powered car ferry, Las Plumas. She speeds car transfer in the Bay Area and provides an important salt water shortcut.

Over 100 other railroads have discovered these vital traits and have specified Pullman-Standard for their equipment needs. They have found – no matter what service demands they must meet –

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Contact your Pullman-Standard representative for the details on Standardization benefits or write for brochures on each of these P-S Freight Cars: PS-1 Box Car, PS-2 Covered Hopper, PS-3 Open Hopper, PS-4 Flat Car and PS-5 Gondola.

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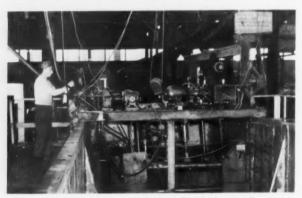




P-S standardized freight cars offer measurable economies through low first cost and longer, maintenance-free car life. Many of these dollar savings can be traced to the P-S use of multiphase production methods that cannot be applied to custom construction.



The high production rate that results from mass car building methods allows Pullman-Standard to invest in specialized jigs and fixtures. Here a massive positioner turns a PS-4 underframe on its side to facilitate down-hand welding by P-S freight car craftsmen.



Efficiency and speed keynote all Pullman-Standard production operations. This machine embosses PS-3 side sheets while on the production line. These special embossments increase side sheet strength and minimize damaging flutter and vibration.



Pullman-Standard research probes many physical areas. Here, one member of the research staff is making microscopic studies of experimental weld results. At the same time, special photographic equipment makes a lasting record of the findings for later study.



P-S Field Service Engineers are constantly on the move compiling in-service inspection reports. These detailed reports are carefully reviewed by P-S research, engineering and production staffs for clues to improvement of standardized freight cars.

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## More Mechanization for M/W Work

For the second consecutive year maintenance programs in general fell below earlier expectations in 1957. Larger tie renewals are planned for 1958, but rail-laying programs will be smaller.

With higher wages sparking the need for greater economies, purchases of work equipment rose to a record high last year, and will be equally high this year. New and better machines are on the way.

The year 1957 was a year in which the railroads again fell short of doing as much repair work on the properties as they had originally planned. What happened with respect to rail and tie renewals, and M/W expenditures as a whole, is shown by the charts. They also indicate what is in prospect for 1958.

To get a picture of what's been happening to M/W work programs it is necessary to go back to 1956. The maintenance budgets of the railroads as a whole for that year contemplated larger rail and tie renewal programs than had been carried out in 1955. But the prolonged strike of steel workers put an effective crimp in these plans. As it turned out, the roads put in fewer ties and laid less rail than in 1955.

The same pattern was repeated in 1957. The budget for the year, as compiled late in 1956, contemplated a 15 per cent increase in the tonnage of new rail to be laid, and a 12 per cent increase in tie renewals. But when railroad business failed to come up to expectations M/W programs were trimmed accordingly. The result was that rail renewals went down 11 per cent and tie renewals declined 8 per cent.

Despite the decreases in these categories of work total M/W expenditures last year showed a slight increase over 1956. The explanation is two-fold. First, and

probably most important, were the wage increases for non-operating employees that went into effect November 1, 1956, and November 1, 1957, plus cost-of-living adjustments and higher fringe benefits. Second is the fact that other types of maintenance work—weed and brush control, track surfacing, bridge repairs, etc.—continued on a more even keel than did rail and tie-renewal work.

#### What's Ahead This Year

Thus, going into 1958, the railroads have several years of curtailed maintenance programs behind them. In view of the generally lower forecasts of business activity it is hardly to be expected that progress will be made in overcoming any deferred maintenance in the current period. It is true that higher overall tie-renewal programs are now contemplated (see chart) but the expected increase is so slight as to be of little significance. Rail renewals, on the other hand, instead of sharing in this slight increase, will decline to a new low for many years.

Current tie and rail replacements are, of course, far below the levels necessary to prevent the condition of the properties from deteriorating. Tie renewals, for example, are running at a rate that presupposes an average tie life in the neighborhood of 45 years. Even the most opti-

mistic estimates place the average tie life at not to exceed 30 years. Thus, it would seem that, from their present low level, there's only one direction for tie (and rail) renewals to go eventually—up.

#### They Buy More Machinery

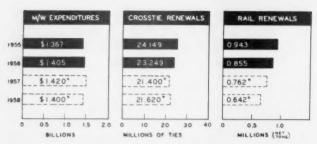
The total amount of M/W work may have gone down in 1957 but a greater proportion of it was done with machinery. This is evident from the fact that estimated purchases of maintenance-of-way work equipment (see chart) went up substantially during the year. In fact, dollarwise they were the highest in history, amounting to \$35.2 million. This figure even topped the \$33.1 million spent in 1956, which was far above any previous year.

While the estimated number of units of work equipment purchased (8,480) was the highest since 1953, it was not as high as in some previous years. It can therefore be concluded from the sharp increase in money spent for equipment during the last two years that the railroads are buying more of the large, expensive machines. A study of the figures for several years back indicates that this is exactly what is happening. When the railroads increase their purchases of grading equipment, cranes, production tampers and highway trucks, the total amount spent for equip-



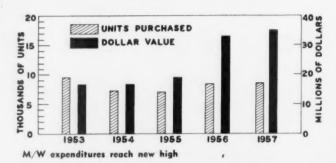
M. H. DICK Engineering Editor

I predict 1958 will see further rapid progress in the mechanization of M/W work. The total amount of such work will be slightly less than last year, but because of higher labor costs M/W expenditures as a whole will remain about the same. Meanwhile, there will be a further increase in the accumulated "backlog" of necessary maintenance.



Tie renewals down-New rail programs decline

\*Indicates estimated figures. Those giving rail and tie renewals for 1957 and 1958 are based on figures furnished to Railway Age by nearly all the Class I railroads. The estimated M/W expenditure for 1957 is based on official ICC figures for the



first nine months. The indicated outlay for this purpose in 1958 is an estimate based on information furnished by the railroads on the proposed extent of their maintenance programs for the current year.

ment is bound to go up out of proportion to the increase in the number of units purchased.

In view of the generally lower forecasts of business activity in 1958 it might be expected that the railroads would be planning lower expenditures for work equipment. But such is not the case. A total of 85 railroads have provided this magazine with estimates of the amount of money they expect to spend for equipment this year. Thirty-nine of these plan to spend more, 42 said they would spend less, and 4 plan to spend the same.

nher of Units

Reported Purchases of Work Equipment

Total Units Reported	8,194		8,392
Unclassified Items	390		550
Weed-Control Equipment	157		212
Transportation of Men & Materials	3,293		4,147
Tie-Renewal Equipment	360		176
Rail-Laying Equipment	898		733
Power Plants	498		353
Miscellaneous Track Machines	798		480
Grading Equipment	325		365
Cranes	82		145
Bridge & Building Tools & Equipment	540		441
Ballasting Equipment	853		790
	1956		1957
		reumour or units	

Overall, these 85 roads plan to spend \$16.9 million for equipment in 1958, an increase of 1.3 per cent over the \$16.7 million they spent in 1957. If prorated over the entire purchases of all the railroads for 1957 this percentage increase would bring the total planned purchases for 1958 to \$35.5 million, which, of course, would be a new all-time high.

#### They Need It to Save

It is not difficult to understand why purchases of work equipment are continuing to go up. Because of constantly increasing wages the savings to be had by mechanization are too great to be ignored. To make the most effective use of machinery practically all roads have revamped their basic M/W organizations with the aim of placing more work in the hands of specialized gangs. Having done this they seek out the most efficient equipment available for the use of these gangs.

The interesting part of it is that this is a continuing process. As wages go up, and as the need for economy becomes more pressing, further and more extensive changes are made in basic organization, and better and more efficient equipment is developed for the specialized gangs. The result is that the investment in equipment for individual gangs is becoming progressively larger and the number of men progressively smaller.

An example is a gang recently developed on a mid-western road for surfacing track. It is equipped with six machines involving a total investment of nearly \$150,000. Man-power consists only of 5 machine operators, 4 to 6 laborers, a foreman and 1 or 2 flagmen, depending on whether the gang is working on single or double track. Production averages about 750 ft per hour of on-track time.

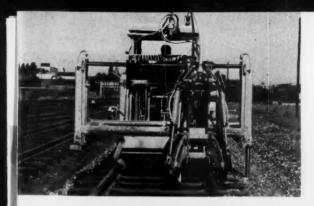
What makes this gang unusual is that, in addition to existing types of machinery such as production tampers, it incorporates newly developed devices that "sight" the track for line and surface with fewer men. Thus it can be expected that manpower requirements will continue to shrink as new and improved equipment is developed and comes into wider use.

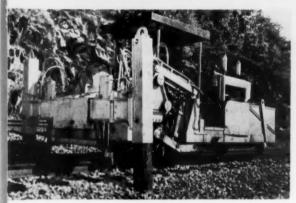
#### More Mechanization Coming

A constant parade of such equipment is being offered to the railroads today. Existing types are being improved to impart speed and greater automation, and entirely new types are being offered. For example, several models of spot tampers with built-in jacks have been placed on the market in recent months. For applying rail anchors—an operation not heretofore mechanized—at least four machines are either ready for the market or are in the process of being perfected. Two manufacturers are also offering machines for spacing ties.

The railroads and supply companies are also exploring new opportunities for mechanizing bridge and building repair and maintenance operations. An example is a set of equipment, including centrally controlled hydraulic jacks, that takes much of the drudgery out of renewing bridge caps and stringers. Another is a "bridge deck" machine that performs just about every boring and driving operation required in the renewal of bridge decks. Others are improved spray outfits for painting both bridges and buildings.

A continuing problem for M/W officers is presented by union agreements that require on-track equipment to be accompanied by train-service personnel. In some instances the wages paid such employees exceed the pay of the men that actually operate the machines. As track gangs become more highly mechanized, the attention of M/W officers and their managements is beginning to focus more sharply on these featherbedding costs. The present year could very well see the beginning of a concerted effort to get them reduced or eliminated. If successful these efforts would add greatly to the amount







MECHANICAL spacing of ties is now accomplished by several machines developed specifically for this purpose. This is a Pullman-Standard tie spacer.

SPOT TAMPERS of several types are now available. Their function is to raise and tamp low spots. The machine (above left), is the Kershaw spot tamper; below left is the McWilliams spot tamper.

of productive work—new rail laid, new ties inserted, track surfaced, etc.—that could be done without the expenditure of additional money.

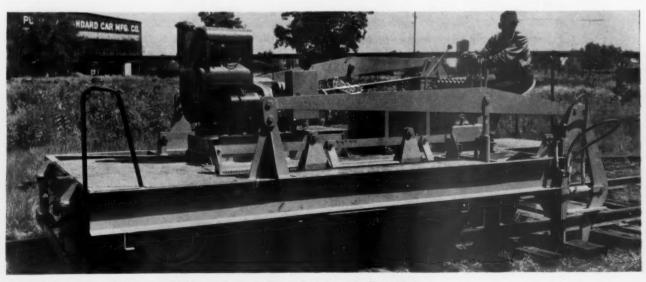
There are other interesting trends apparent in the M/W picture. One is the increasing popularity of continuous welded rail. Lured by the potential economies of "jointless" track, more railroads made test installations last year and others are contemplating such installations this year. Also, additional miles of "frozen joint" rail were installed in 1957, and the year also saw the first experimental installations of "glued" rail, one on the Delaware &

Hudson and the other on the Quebec North Shore & Labrador.

Grinding the running surface of rail out-of-face is another practice that is gaining rapidly. Proponents of this practice say that it lengthens the life of rail, produces smoother riding track, and reduces track-maintenance costs generally. Many of them advocate the grinding of rail in track on a cycle of sufficient frequency to control rail-end batter, corrugations and other surface imperfections.

M/W officers have a hard row to hoe these days, and it's made harder by new complications that are continually cropping up. One is the recent Supreme Court decision to the effect that a track motor car and push car coupled together comprise a vehicle that is covered by the Safety Appliance Acts. Another is pending legislation which, if passed, would add greatly to the cost of operating on-track vehicles. A third is the increasing pressure to stabilize the M/W work force.

The average M/W officer today has the know-how and the tools to give his rail-road the best track at the lowest relative cost in history; all he asks is the opportunity to use that know-how and those tools without the artificial handicaps.



TRACK GANGS are being more highly mechanized. Shown here is a Nordberg Trak-Surfacer (foreground) raising track to grade ahead of two Jackson Track Maintainers.

## New Year Problems

By W. G. Vollmer, President, Texas and Pacific Railway



Down through the ages, problems have been the constant companion of mankind.

With the passing of time, civilization has moved onward and upward. But this climb has been accompanied by a vast increase in the complexity and the gravity of the problems of life.

Critical and challenging problems have been created by a tug of war which has been in progress for many years between such basic conflicting forces as a free enterprise economy and a socialistic planned economy, a free way of life and communistic slavery, peace and war.

The supreme problem facing the people of the world this New Year is that of developing the capacity to solve wisely and well the problems which man, himself, has created.

In spite of the complexity and the gravity of the problems of life, they are essential to human progress. Scientific achievements, material progress and the expansion of human knowledge stem from the moving desire of man to overcome the problems generated by the march of world events.

In the business world, competitive problems have stimulated research, encouraged the adoption of new methods and procedures, spurred man to greater efforts and greater achievements. The success or failure of individuals and business enterprises alike is measured by their ability, or lack of it, to solve successfully the personal and social, the economic and political problems flowing from an ever-changing world.

So it has been with the railroads. In their long and useful history, they have encountered a multitude of difficult and complex problems. Many of these problems they solved successfully. Some they didn't.

Perhaps the most critical problem ever experienced by the railroads is the one they face today. It is that of devising ways and means of meeting successfully the competition of various other forms of transportation *promoted*, and in part financially *supported* by municipalities, community organizations, state and federal governments.

There is no easy solution of this problem. But there is a solution, for there is a right answer to every problem. And I have faith that eventually it will be found.

Meanwhile, the peace, the progress and the prosperity of 1958 will be measured by the capacity of man to solve wisely the problems ushered in by the New Year.



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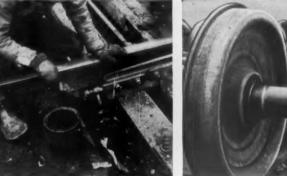
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F. N. HOUSER, JR. Associate Editor

I predict financing of new freight cars will continue as a top problem in the industry in 1958. I don't expect any revolutionary new design developments in the new car field, but new kinds of piggyback equipment will be tried and mechanical reefers will get wider use. Big job ahead is to improve the hotbox problem.

## The 1958 Freight Car Dilemma---

- The industry needs at least 85,000 new cars a year, but . . .
- Where's the money to come from?
- · How can design differences be resolved?

Traffic for the present car fleet, and funds to buy cars for this fleet's replacement and expansion loom as the biggest problems confronting railroads today. Concurrently with these, however, must be the realization that the cars now being built, being ordered, or going unordered, will do much toward producing the car fleet and car shortages of tomorrow.

Financial problems, changing traffic patterns, and technological advances are all wrapped up in this. Pennsylvania

President J. M. Symes, in explaining the Eastern railroads' proposal for the creation of a government agency to buy rolling stock for lease to railroads, recently warned that "we need to order 85,000 to 100,000 new freight cars a year for each of the next ten years just to correct obsolescence and increase our fleet . . . Railroads are going to have to spend billions of dollars for equipment . . . Guesses range anywhere from a billion to a billion and a half every year for the next

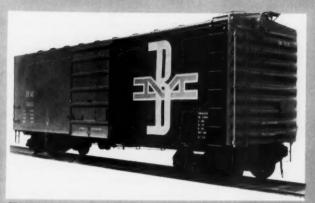
ten years, depending on whether you are talking minimum or desirable requirements. I favor the high side myself."

Car orders during neither 1956 nor 1957 were placed at even half the minimum annual rate suggested by the Pennsylvania's president. In 1957, however, car builders proved they could meet this production level. Still working off the rush of car orders placed late in 1955, car builders and railroad shops turned 1957 into one of the pace setters in all car building history. In the past thirty years, only 1948 saw more freight cars produced. Domestic car deliveries reached almost 100,000 units by year end and the total car fleet grew. Never before have railroad and private car line shops produced more cars in a single year, but at the same time the bad order ratio rose.

Financing problems for freight car purchases at a billion-dollar annual rate were unresolved as 1958 began. There were some significant developments in 1957, however. The Delaware & Hudson took a pioneer step in alleviating the perplexing boom-and-bust problem confronting car builders. The D&H signed a contract with Bethlehem Steel for the purchase of 1,000 hopper cars at the rate of 200 per year for each of the next five years.

The Minneapolis & St. Louis has just put into operation a plan through which it will acquire Pullman-Standard's "PS" (Continued on page 48)





MOBILE ADS are brightening freight cars. Many roads now use giant lettering.



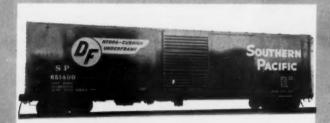
DEEP FREEZE mechanical reefers may set new trend in frozen food traffic.



BRIGHT SPOT in ear building situation is growing use of covered hoppers.



BETTER LIVING for crews in new cabooses permits new operating practices.



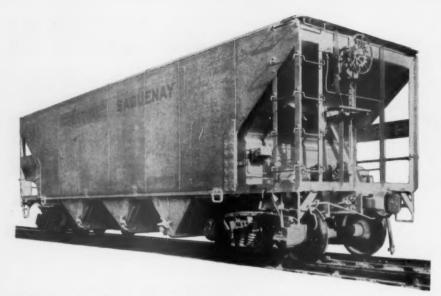
SHOCK ABSORBERS are being built into cars to cut damage in transit.



SPECIAL JOBS are a challenge, sometimes call for radical solutions.



EXPANDING piggyback service provokes equipment innovations. More new ideas ahead for 1958.



CORROSION RESISTANCE with reduced weight is accomplished with alloys.



NEW DESIGNS have been developed, like tank cars without center sills.

(Continued from page 46)

standardized box, flat, gondola and hopper cars to immediately replace units destroyed in service. This will keep the M&StL car fleet at full strength and produce economies in the M&StL's equipment trust situation.

Car builders' problems still remain—lack of real regularized buying and insufficient quantities for real production runs. An ACF spokesman recently quoted a price of \$9,300 each for 40-ft box cars purchased in lots of 50 and a price of \$8,050 each for lots of 1,000. Individual tailoring was blamed as one source of high equipment costs because it prevents real mass production by builders.

Back in 1956, there were 3,145 box cars purchased from builders. In the case of ACF, these ranged in quantities of from 2 to 400 cars. Even so, lack of agreement on design probably ranks below

lack of funds in preventing volume car purchases in today's tight money market.

From a technological standpoint, much remains to be done. A challenge to this effect was recently voiced by O. M. Solandt, Canadian National's vice-president—research and development. "I do not," said Mr. Solandt, "look for any spectacular developments in [rolling] equipment that will revolutionize railway economics in the next ten or even twenty years."

More covered hoppers, mechanical refrigeration, and new types of piggyback equipment are all in the immediate future. The increasing popularity of the covered hopper for moving all types of bulk products was demonstrated by a spectacular 28 per cent increase in the ownership of these cars during the twelve months of 1957. More than 12,000 of these cars were built and total ownership rose to 54,000.

While the present 2,800-unit mechani-

cal refrigerator car fleet is adequate and specifically designed for the movement of frozen foods, mechanical refrigeration will soon be applied to cars built solely for the transportation of fresh produce. Tests of mechanical cars in fresh food movements have been carried on with increasing frequency. Pacific Fruit Express's order for 500 mechanically-refrigerated, fresh-produce cars will be delivered during 1958.

Piggyback volume continues to expand and this growth will be accompanied by new developments in cars used for the transportation of highway trailers and containers which evolve. At year's end, the New York Central was receiving the first production models of cars to be used in its container-type Flexi-Van operation, and Pullman Standard's container system has been revealed to take its place with several other schemes already in operation or under test.

All types of containers and longer highway trailers—now legal in most states—are causing most piggyback operators to re-examine their present trailer-carrying cars. In 1958 there should be greater interest in lighter cars capable of picking up their piggyback loads still more rapidly, and performing the subsequent movement without labor- and time-consuming mechanical tie-down.

Freight car brakes, bearings and bearing lubrication will continue in their present states of flux during the coming months. More installations of off-tread brakes and composition tread-brake shoes are to be expected.

Car department officers agreed last year that "roller bearings on freight cars have a good case, and may—in the future—be standard . . . Railroads are reluctant to enter into this conversion program; but because of the millions of dollars spent every year on hot boxes, they will be forced into such a conversion if the hot box mileage does not improve. This is a challenge to lubricator manufacturers . . ."

The hot box record in 1957 was the worst in five years. During 1957, the first mandatory applications of journal lubricating devices was required, and the AAR hinted that any extension of the 1960 date for elimination of all loose waste was improbable. Roller bearings and cartridge sleeve-type bearings-new competitorswere being used in increasing numbers; but less than two per cent of the total US car fleet has either type. Slashing of railroad maintenance and servicing budgets while the conventional journal box with waste lubrication remains standard under almost all cars presages a bleak outlook for 1958. Hot boxes promise to continue to be the biggest single deterrent to the orderly operation of all trains during this year.



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J. W. MILLIKEN Director of Research

My outlook for 1958 is that railroads and their suppliers will have a pretty good year, in spite of present trends that might indicate otherwise. Purchases and capital expenditures should approach \$3 billion. Inventories are down, and any lift in traffic will quickly bring a boost in the buying of operating materials.

## **Buying Rise Hinges on Traffic**

In the closing months of 1957, railroad spending for materials, supplies and fuel took a rather sharp drop. The roads began living more heavily out of inventory.

Inventories on April 1, 1957, were valued at \$771.5 million. By September 30 the value of stocks on hand had fallen to \$728.2 million—a decrease of about 5.5%. Most of this decline was recorded in August and September. Undoubtedly this decrease was due in part to the fact that in the second half of the year material prices were generally somewhat lower than those prevailing during the first half.

Primarily, however, the decrease in inventory was a matter of using material and not replacing it. When the 1957 year-end inventory figures become available it's likely that the railroad total will be about where it was in January 1956—\$687 million. Any traffic bulge at all, therefore, would shortly cause the railroads to increase their purchases substantially.

#### Why Traffic Should Rise

Right now, traffic is the big worry of the railroads. There's little doubt that in the early months of this year, traffic levels will be below those of 1957. But there are some bright spots, and as the year goes on the picture could get rosier. Here are some of those bright spots:

- 1. Soft coal production in 1958 should be about 3% above 1957 volume;
- 2. Electric utilities expect to spend about 9% more for capital expenditures in 1958 than they did in 1957;
- 3. The electronics industry expects an increase of about 8% in its business;
- Demand for petroleum products is expected to increase by about 1%; and
   Activity in the homebuilding field

should be up rather sharply. The largest amount of this activity takes part in the first half of the year. So the whole traffic picture is far from dark. And, since buying trends do follow traffic, this activity should react accordingly.

After mid-year, presumably, industry will have completed most of its operating out of inventory and will resume purchasing for operating materials and supplies. The National Industrial Conference Board has forecast that in the second half gross national product will be running at an annual rate of \$441 billion, compared with the 1957 rate of about \$440 billion and the expected 1958 first half rate of \$438

"Bearishness" seems to be fashionable today with some railroad suppliers, and others, but manufacturers of maintenance of way equipment have good reason to be "bullish" about 1958. A survey by Railway Age and its companion publication, Railway Track and Structures, indicates that purchases of such equipment during 1958 probably will exceed slightly the 1957 record volume of \$35.2 million.

Here is hard evidence that the railroad industry increasingly sees the need to spend money to make money.

Interestingly enough, one of the railroads' chief rivals for the nation's freight traffic dollar, the common carrier trucker, seems pretty optimistic about 1958, according to trucking's official organ, Transport Topics. It is noteworthy, too, that the one part of railroad traffic which continued to grow during 1957, in the face of declining carloadings, is piggyback.

While TOFC traffic still brings in a relatively small part of the carriers' freight revenue, its importance in the overall picture is increasing. It's not illogical, therefore, to expect that piggyback will be one bright spot in the railroads' traffic picture—during the first half of the year especially.

It was only in 1957 that the railroads' several traffic research groups went into business. The results of the work of these groups should *begin* to show up during 1958 in the form of rates which will be compensatory but will still move traffic.

Thus, from where we sit, 1958 traffic prospects are not exactly gloomy.

We expect that as business conditions generally improve during the latter half of the year the carriers once again will be in the market for freight cars. Thus we'll stick with our earlier forecast that as many as 75,000 freight cars may be ordered during 1958, with most of them showing up on the books during the latter half of the year.

#### **Bright Spots in 1958 Purchasing Picture**

- ► Some major traffic sources see '58 as better than '57.
- ► Inventories, down already, will have to be rebuilt.
- ▶ Equipment that saves on labor costs continues strong.
- ► Credit is easier, interest rates have stopped rising.
- ► Rising operating costs force spending-to-save programs.

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## 1957 Review of Railway Operations

By J. ELMER MONROE

Vice-President, Association of American Railroads, and Director, Bureau of Railway Economics

#### Highlights of the Year

RAILROAD TRAFFIC, costs and earnings in 1957 generally followed the national economic pattern. The decline in business activity, which was more pronounced at the end of the year, resulted in a drop-off in traffic. Wage and other costs continued to rise, however, and net earnings for the year were down.

The rate of return earned by the railroads in 1957 approximated 3.33 per cent on net investment, a return lower than that earned in any of the seven preceding years except the 3.28 per cent return earned in the recession year 1954.

On the brighter side, the railroads in 1957 installed more new freight cars than in any of the past 30 years except 1948. After subtracting retirements, freight car ownership was increased by 40,000 units at year's end.

Much other capital improvement work was accomplished during the year as gross expenditures for improvements reached a near record level of \$1.4 billion.

Notwithstanding the seriousness of the immediate situation, the railroads are optimistic about the long-range outlook as they see an awakening public interest in the nation's transportation system. Some measure of improvement could come in 1958 from favorable consideration and action by the Congress on the railroads' legislative program.

Inflation, declining business activity, and other adverse forces dominated the national economy in 1957. While the effects of these unfavorable developments were comparatively mild in the first two-thirds of the year, economic trends fell off more sharply after Labor Day. Pressures created by rising costs and declining sales assumed more serious proportions.

#### HIGHLIGHTS OF THE YEAR

#### EVIEW OF RAILWAY OPERATIONS IN 1957

By the end of the year, general industrial activity lagged more than five per cent behind the December 1956 peak. While this setback was not as major as the ones in 1949 and 1954, it was by no means certain that the low point of the current down-swing had been reached. Predominating forces of the moment seem to point to further readjustments by industry in 1958.

A significant development during 1957 was a growing awareness of the seriousness of the railroad situation and the need for remedial action.

Basic problems considered by the Presidential Cabinet Committee in its April 1955 report, though partially obscured by the resurgence of freight traffic in '55 and '56, were again brought into focus. The precarious situation was outlined by railroad executives in a White House conference in early December 1957. Congressional concern was manifested, too, in a November announcement by Senator Warren G. Magnuson, chairman of the Senate Committee on Interstate and Foreign Commerce. He revealed that the Subcommittee on Surface Transportation, headed by Senator George A. Smathers, would hold hearings beginning January 13, 1958, to look into "the deteriorating railroad situation and its effect on the national transportation picture." Senator Smathers keynoted his hearings by observing that American railroads are heading for serious trouble; and he said attention should be given to constructive action to allow railroads to help themselves before the situation has deteriorated to the point where drastic action would be necessary.

This approach indicates that the hearings will aim to place in better perspective the essential role of railroads in the nation's transportation system—and the steps needed so they may achieve their true potential of transportation economy and service to the public.

In 1957 Congress again considered the 1955 recommendations of the Presidential Advisory Committee on Transport Policy and Organization. Certain of these proposals were enacted, but no action was taken on the fundamental recommendations for revision of ratemaking policy to provide more equal competitive conditions among the various forms of transportation.

Increased freight rates and passenger fares were authorized by the ICC in 1957 to help railroads meet increased costs. Further proceedings involving charges for freight, express and mail services were pending at the close of the year. The ICC also held a series of hearings in its investigation of the passenger service deficit (Docket No. 31954).

The railroad share of total intercity traffic in the United States fell further in 1957. Government programs for development of highways, waterways and airways have serious implications of increasing competitive handicaps. Nevertheless, the railroads remain optimistically hopeful of more equitable future treatment at the hands of the public they serve.

#### Details of 1957 Performance

#### Traffic Trends

Loss of momentum in the nation's economy, which became evident in the latter part of 1957, was reflected in railroad traffic trends throughout the year. Except for the July-August period when 1956 traffic was affected by a strike in the steel industry, 1957 carloadings were consistently less than in the same month the year before. Passenger traffic was below the 1956 level in every month. Severity of the declines became progressively greater in the last four months of the year.

Revenue ton-miles, a measure of freight traffic which combines both weight and distance, approximated 615 billion in 1957. This total was about 4.9 per cent below the 647 billion ton-miles handled in 1956, and was also below the 1955 volume.

Revenue passenger-miles, which gave hopeful signs of leveling off in 1956, resumed a downward trend in 1957. Passenger-miles for the year approximated 26 billion and were nearly 8 per cent below the 1956 volume. There is no indication that the downward trend will be checked in the near future.

Carloadings of revenue freight declined 6.2 per cent in 1957. The aggregate for the year was 35.5 million cars, some 2.3 million fewer than the number loaded in 1956. In only one of the previous 17 years (1954) were fewer loadings handled by the railroads.

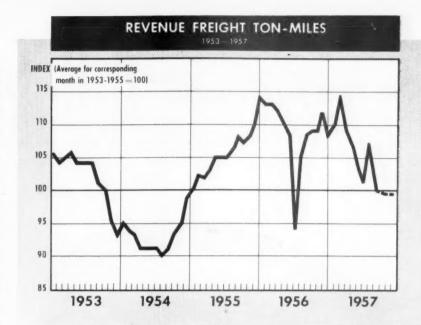
Except for an increase in ore loadings, each of the commodity groups for which loadings are reported showed declines under 1956, ranging from 1.2 per cent for grain, which accounts for 7.5 per cent of total loadings, down to 22.4 per cent for livestock, smallest of the groups.

The miscellaneous group which accounted for nearly half of all carloadings, decreased by 1,402,000 cars, or 7.4 per cent. Coal loadings, ranking second in volume, were down by 258,000 cars, or 3.7 per cent, while forest products and coke declined by 13.9 per cent and 6.7 per cent, respectively.

Less-than-carload freight, particularly susceptible to competition from motor carriers, continued a downward trend and was below the 1956 aggregate by 10 per cent.

#### **Rates and Fares**

Because of continued increases in operating costs, railroads found it necessary in 1957 to seek further upward adjustment of transportation charges in each principal field of service affected by the increased costs—freight, passenger, mail



and express. Some increases were granted; other requests were pending at year's end.

Ex Parte No. 206, freight rate increases. An investigation into the adequacy of freight rates and charges on all U.S. railroads was instituted by the commission in response to a petition filed by Eastern and Western roads on September 27, 1956 (additional petitions were filed subsequently by Eastern, Western and Southern roads). This proceeding was concluded by a report and order of August

6, 1957, authorizing increases averaging about 10 per cent nationally, effective August 26, 1957. Authorizations varied territorially, averaging about 10.8 per cent in the East, 10.4 per cent in the West, 8.3 per cent in the South and 7.0 per cent in the Pocahontas Region.

The authorizations of August 6, were inclusive of interim increases averaging 5.0 per cent, made effective December 28, 1956, in the East and West, and Feb-(Continued on page 59)

Table 1: Comparative Traffic Summary: 1948-1957

Revenue	Revenue	Revenue
ton-miles	passenger-miles	carloadings
(millions)	(millions)	(thousands)
637,917	41,179	42,719
526,500	35,095	35,911
588,578	31,760	38,903
646,620	34,614	40,499
614,754	34,010	37,985
605,813	31,655	38,216
549,259	29,286	33,915
623,615	28,526	37,636
647,077	28,185	37,845
615,000	26,000	35,500
	ton-miles (millions) 637,917 526,500 588,578 646,620 614,754 605,813 549,259 623,615 647,077	ton-miles (millions) (millions) (millions) (millions) (37,917 41,179 526,500 35,095 588,578 31,760 646,620 34,614 614,754 34,010 605,813 31,655 549,259 29,286 623,615 28,526 647,077 28,185

Table 2: Carloadings by Commodity Groups: 1957 vs. 1956

			Decrease unde	er 1956
	Per cent	1957		
Commodity	of	carloadings	Carloadings	Per
group	total	(thousands)	(thousands)	cent
Miscellaneous	49.4	17,551	1,402	7.4
Coal	19.0	6,750	258	3.7
Ore	8.1	2,862	1113	14.1
Merchandise, LCL	7.8	2,750	305	10.0
Grain	7.5	2,674	31	1.2
Forest products	5.6	1,995	322	13.9
Coke	1.6	575	41	6.7
Livestock	1.0	343	99	22.4
Total	100.0	35,500	2,345	6.2
* *				

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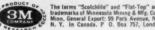


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(Continued from page 55)

ruary 23, 1957, in the South, designed to meet the cost of higher wage rates, a higher rate of payroll tax, and higher material prices incurred near the close of 1956.

Although the Ex Parte 206 proceeding had been inaugurated by Eastern and Western railroads with a view to improving their inadequate rates of return, the commission concluded in its report that carriers "must look primarily to technological advances in the art of railroading to achieve greater efficiency and improved service as the major hope for increasing their rates of return." The commission's staff estimated that at the 1956 traffic level the authorized increases would yield \$897,800,000 annually in additional revenues if applied fully to both interstate and intrastate traffic. The commission estimated the authorized increases would compensate railroads for their known increased costs, including the contracted increase in wage rates which became effective November 1, 1957. The commission also stated that Eastern and Western roads would obtain "some" additional revenues over and above such known costs. The report noted that other cost increases were impending and invited the carriers "when these become an actuality" to petition for further compensatory increases in rates and charges.

Ex Parte No. 212, freight rate increases. In pursuance of the procedure suggested in the August 6 report in Ex Parte 206, the carriers filed on December 19, 1957, for permission to publish a schedule of selected increases in freight rates and charges. Tariffs setting forth the selected increases, averaging 2.3 per cent, were filed on December 23, 1957, to become effective on February 1, 1958, subject to possible investigation and suspension by the commission.

Passenger fare increases. Except for commutation fares, in which various local adjustments were made, passenger fares generally, both coach and first class, were increased by 5 per cent early in 1957. These 5 per cent increases became effective, with certain exceptions, on January 1 in the West, January 9 on eight railroads in the East, February 2 on other Eastern roads except those in New England, and on February 17 in New England. In the South the 5 per cent was added effective February 20, 1957.

Six Eastern railroads (Chesapeake & Ohio, New York Central, Norfolk & Western, Pennsylvania, Pennsylvania-Reading Seashore Lines, and Pittsburgh & Lake Erie) which on August 10, 1956, had requested 45 per cent increase in first class fares, were authorized to in-

INTERCITY FREIGHT TRAFFIC BILLIONS OF OIL PIPELINES MOTOR TRUCKS RIVERS AND CANALS RAILROADS 1 200 GREAT LAKES 1,000 800 600 400 RAILROADS 200 45 '47 '53 '55 '57 1939 (est.)

crease such fares by an additional 15 per cent (20 per cent including the increase of January 9) effective May 15, 1957.

In November a group of 11 Eastern railroads filed schedules calling for a further 5 per cent increase in coach fares, which became effective January 1, 1958.

Express rates. On a request of August 21, 1956, for a 15 per cent surcharge on LCL express shipments in Eastern territory, pending in Docket No. 32035 at the beginning of the year, the commission

on May 31, 1957, authorized an increase, with exceptions, amounting to approximately 10.6 per cent, but denied interterritorial fourth section relief.

On July 24, 1957, the REA petitioned the commission for a general increase of 15 per cent in LCL and carload rates and charges, to meet increased operating costs incurred by the agency and the railroads and to reduce railroad losses on express service. Hearings were held under (Continued on page 62)

Table 3: Revenue Per Unit of Traffic: 1948-1957

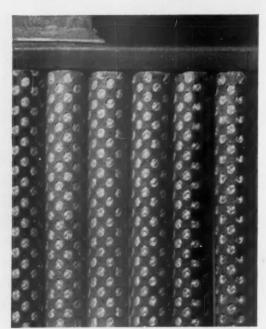
	Per	Per
	ton-mile	passenger-mile
Year	(cents)	(cents)
1948	1.251	2.341
1949	1.339	2.452
1950	1.329	2.561
1951	1.336	2.601
1952	1.430	2.664
1953	1.478	2.660
1954	1.420	2.620
1955	1.370	2.604
1956	1.384	2.684
1957 (est.)	1.440	2.820

Table 4: Employees and Their Compensation: 1940-1957

	Average number of	Total	Average annual earnings of	Average strai	ght time hourly
Year	employees	(thousands)	employees	Rate	Earnings
1940	1,026,956	\$1,964,481	\$1,913	\$0.74	\$0.77
1945	1,420,266	3,859,907	2,718	0.93	0.97
1950a	1,220,784	4,620,518	3,785	1.58	1.65
1951a	1,276,000	5,336,198	4,182	1.76	1.84
1952a	1,226,663	5,338,175	4,352	1.84	1.94
1953	1,206,312	5,326,316	4,415	1.89	1.99
1954	1,064,705	4,855,100	4,560	1.94	2.05
1955	1,058,216	4,993,662	4,719	1.96	2.08
1956	1,042,664	5,324,672	5,107	2.13	2.25
1957 (est.) ,	986,500	5,333,000	5,400	2.27	2.40
	active wage increas	es paid in subsequ	ent years.		



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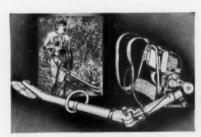


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(Continued from page 59)

Ex Parte No. 210, beginning October 14, 1957, and had not been concluded at the year's end.

Mail pay. Eastern and Southern railroads filed petitions with the ICC during the year 1956 for a re-examination of mail pay rates. This filing was followed in 1957 by a similar petition on behalf of Western roads. Agreements with the Post Office Department were reached in 1957 by Southern and Western railroads, and after hearings on December 3, the commission by report and order of December 30, 1957, approved the agreed increases. The authorized increase for Western roads amounted to 7.5 per cent effective July 1, 1957. For Southern roads the authorized increase amounted to 6 per cent from July 1 to August 31, 1957, and 13.5 per cent from September 1, 1957. The 13.5 per cent increase was designed to offset the transfer of storage service operations in the South to a space-used basis effective September 1, 1957, so as to result in a net increase in mail revenue for the Southern carriers of about 7 per cent.

Hearings on the petition of Eastern roads were concluded in 1957 and the matter has been set for oral argument in February 1958.

Average unit revenues. Increased freight rates and passenger fares were reflected in railroad operating statistics for the year.

Average revenue per ton-mile for the year 1957 was about 1.440 cents, up 4 per cent over the average of 1.384 cents for the year 1956. The 1957 average stands second to the all-time high of 1.478 cents received in 1953.

Revenue per passenger-mile averaged about 2.820 cents in 1957, about 5 per cent greater than the 2.684 cents received in 1956—at that time, a post-war high. The 1957 average, however, remained below the averages for a period of years prior to 1929.

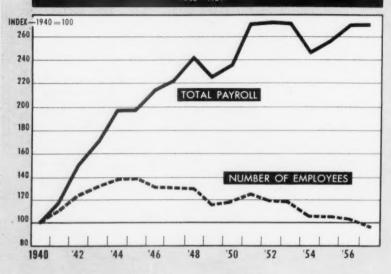
#### **Employment and Wages**

Railroad employment in 1957 declined for the sixth consecutive year, and the average number of employees fell below the one million mark for the first time since 1939. The aggregate payroll, however, approached an all-time peak.

The straight-time rate of pay of railroad employees averaged \$2.27 per hour in 1957, a rise of 14 cents over the 1956 average, and annual earnings per employee averaged \$5,400. Both hourly and annual earnings were the highest on record.

Under provisions of the industry's three-year term agreements which continue through October 31, 1959, a cost-





of-living wage increase adjustment of 3 cents per hour was made effective May 1, 1957, and on November 1 there was made effective another upward cost-of-living adjustment of 5 cents per hour in addition to a general increase of 7

cents per hour due on that date under the agreements. Thus, by the end of 1957 wage rates were 15 cents an hour greater than they were at the beginning of the year.

(Continued on page 66)

Table 5: Railway Material Price Index: 1939-1957

(Mid Year 1947-1949 == 100)

	Materials and		All
	supplies (other	Fuel	materials
Month	than fuel)	(oil and coal)	including fuel
December 1939	55.5	47.5	52.6
December 1945	72.1	69.3	71.1
October 1953	131.1	111.8	123.8
October 1954	132.8	109.1	123.9
October 1955	141.6	110.1	130.2
January 1956	143.2	112.7	132.0
April 1956	145.1	116.4	134.5
July 1956	144.3	117.3	134.3
October 1956	149.5	119.0	138.3
January 1957	150.3	124.1	140.5
April 1957	151.7	129.6	143.2
July 1957	154 1	127.5	144.0
October 1957	154.2	123.5	142.9

Table 6: Material Prices and Wage Rates: 1939-1957

(Average 1947-1949 = 100)

	Charge-out prices for all materials	Wage rates	Material prices and wage rates
Year	including fuel	(All employees)	combined
1939	52.0	56.5	55.2
1945	69.3	71.2	70.6
1949	106.4	110.0	108.9
1950	105.7	120.5	116.1
1951	117.5	134.1	129.1
1952	119.1	140.8	134.3
1953	122.0	144.2	137.5
1954	124.2	148.4	141.1
1955	126.1	150.0	142.8
1956	134.2	162.4	153.9
1957	p 142.6	p 174.0	p 164.6
p Preliminary.			



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(Continued from page 62)

At the end of 1957, the minimum rate of pay generally effective was \$1.85 per hour, \$14.80 for an eight-hour day, and \$74.00 for a 40-hour week. The minimum straight-time monthly wage in the railroad industry is generally \$321.90.

In addition to wages as such, the railroads as employers provide, among other things, vacations with pay, holiday pay for non-operating and certain yard service employees, unemployment and sickness benefits, and hospital and medical insurance for the non-operating classes and their dependents. Also, collateral to wages is the Federally-administered retirement system, the cost of which is borne equally by the railroads and their employees. Certain roads provide supplemental pensions and gratuities.

The total payroll of \$5,333 million for 1957 included about \$212 million for paid vacations and \$66 million for paid holidays.

Among supplemental costs not included in the payroll were \$258 million for retirement taxes; \$82 million for sickness and unemployment insurance taxes; \$50 million for supplemental pension benefits and about \$97 million for hospital and medical insurance. These supplemental costs not included in payroll amounted to nearly \$500 per employee.

None of these costs (vacations, holidays and supplements) are reflected in the straight-time hourly wage rate. They actually amount to nearly 38 cents per straight-time hour paid for and thus are equivalent to more than 16 per cent of the straight-time rate.

Taking into account these designated supplemental payroll costs as well as premium pay for overtime worked and the so-called mileage basis of pay for train and engine service employees, it actually costs the railroads about \$2.87 for each employee-hour actually worked or approximately 60 cents per hour in excess of the average straight-time rate of pay.

#### **Prices and Wage Rates**

The index of railroad material prices compiled by the Bureau of Railway Economics is shown in Table 5 for various dates from December 1939 to October 1957. The index, using the mid-year prices 1947-1949 as 100, rose from 52.6 at the end of 1939 to a peak of 144.0 in July 1957. It receded slightly to 142.9 in October 1957.

The index for materials and supplies (other than fuel) rose to an all-time peak of 154.2 in October 1957, but the fuel index, at 123.5 was 6.1 points below its peak of April 1957.

The indexes in Table 5 show the trend in spot prices. Table 6 shows the trend in "charge-out" prices, which measure the prices of materials at time consumed in terms of their original purchase price. Also shown is an index trend for wage rates and a combined index of prices and wages.

The index of charge-out prices for all

materials and supplies in 1957 stood at 142.6 of the 1947-1949 average, while wage rates were 174.0 per cent of those of the 1947-1949 period. The combined index of prices and wages stood at 164.6 in 1957, an increase of 7 per cent over 1956.

#### **Financial Results**

Rail earnings dipped sharply in 1957, caught as they were in a squeeze between declining traffic on the one hand and increased wage rates and material prices on the other. Rate and fare increases in effect during the year served to hold gross revenues close to the 1956 level, but increased costs caused an increase in operating expenses, despite the decline in volume of traffic. Net working capital continued the downward trend experienced in 1956. The rate of return on net investment in 1957 approximated 3.33 per cent, considerably under the meager 3.76 per cent average return earned in the first 11 post-war years. Net income for the year is estimated to have fallen about \$165 million below that of 1956 and more than \$200 million below net income in 1955.

The ratio of net income to net assets for the railroad industry is at a level only slightly more than half that of public utilities in the power and communications fields and less than two-fifths of the comparable ratio for manufacturing corpora-

Operating revenues for the first 11 months of 1957 aggregated \$9,667 million, about \$8 million or 0.1 per cent below the corresponding 1956 total. Revenues were about \$418 million above those of the first 11 months of 1955, a comparatively good earnings year. Operating expenses for the 1957 period amounted to \$7,544 million, about \$131 million or 1.8 per cent above the 1956 total for the 11 months. This greater relative increase in expenses than in gross produced an increase in the operating ratio for the 11 month period from 76.62 per cent in 1956 to 78.04 per cent in 1957.

Railway tax accruals in the 1957 period were less by about \$36 million than they were in the 1956 period. Federal income taxes declined by about \$55 million because of sagging earnings, but this reduction was partly offset by an increase of \$8 million in payroll taxes (to \$315 million) and an increase of nearly \$12 million in state and local taxes. The payroll tax increase was largely due to a rise in the unemployment tax rate from 11/2 per cent to 2.0 per cent on January 1, 1957. This tax rate was further increased on January 1, 1958, to 2.5 per cent. Each increase of one-half of one per cent in the rate of payroll tax costs the Class I railroads about \$21 million a year.

Net railway operating income—the re-

Table 7: Condensed Income Account: 11 months 1955-1957

	1955	1956	1957
	(millions)	(millions)	(millions)
Total operating revenues	\$9,249	\$9,675	\$9,667
Total operating expenses	6,947	7,413	7,544
Operating ratio (per cent)	75.11	76.62	78.04
Taxes	1,019	1,047	1,011
Net Railway Operating Income	1,050	984	863
Rate earned (per cent) a	4.22	3.95	3.33
Net income after charges	828	784	661
a Rate of return on net investment for full calendar year	(1957 estimated).		

Table 8: Operating Revenues: 11 months 1955-1957

	1955	1956	1957
	(millions)	(millions)	(millions)
Freight	\$7,833	\$8,226	\$8,252
Passenger	673	685	670
Mail	252	253	252
Express	106	107	87
All other	385	404	406
Total	\$0 240	\$9.675	\$9.667

Table 9: Operating Expenses: 11 months 1955-1957

	1955 (millions)	1956 (millions)	1957 (millions)
Maintenance of way	\$1,264	\$1,298	\$1,319
Maintenance of equipment	1,632	1,737	1,758
Fransportation	3,414	3,682	3,746
Fraffic, general & other	637	696	721
Total	\$4.947	\$7.413	\$7.544

mainder after payment of operating expenses, rents and taxes, slumped to \$863 million in the 11 month period of 1957. This was \$121 million or 12.3 per cent under such earnings in the 1956 period, and \$187 million or 17.8 per cent under those of the first 11 months of 1955. Net railway operating income includes tax credits representing deferral of income taxes through accelerated amortization of defense facilities, estimated at \$139 million for the full year 1957.

Net income, which also includes the amount of such temporary tax credits, aggregated \$661 million in the 1957 period, nearly 16 per cent less than in the like 11 months of 1956, and 20 per cent less than in the 1955 period.

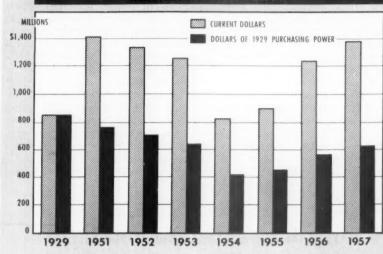
Notwithstanding the lower volume of traffic, freight revenue for the 11 month period of 1957 (\$8,252 million) was about 0.3 per cent greater than the corresponding 1956 aggregate. This fractional increase was the result of the higher level of freight rates in effect in the 1957 period. The increase in freight revenues was partly offset by decreases in revenues from passenger, mail and express services. Passenger revenue, despite fare increases, declined by \$15 million to \$670 million for the period. Mail revenue at \$252 million was down by only \$1 million while rail revenue from express service, affected by a strike of certain Express Agency employees between April and July 1957, was down \$20 million from that of the 1956 period. All other revenue amounted to \$406 million, about \$2 million greater than in the corresponding months of 1956.

For the third consecutive year, each of the principal operating expense accounts showed increases over those of the previous year. In 1957, the two maintenance accounts—way and structures, and equipment—increased 1.7 per cent and 1.2 per cent, respectively. Transportation expenses, the largest of the groups, increased by 1.7 per cent, while traffic, general and other expenses were up 3.6 per cent.

Net railway operating income for the full year 1957 is expected to approximate \$920 million. This amount would represent a reduction of \$148 million, or 14 per cent, under the 1956 aggregate, and would produce a return on net investment of about 3.33 per cent, third lowest in the past 10 years. Excluding tax deferrals arising from accelerated amortization, estimated net railway operating income in 1957 would produce a rate of return on net investment of not more than 2.9 per cent.

Net working capital, which had fallen from \$938 million at the end of 1955 to \$683 million at the end of 1956, declined further in 1957 and stood at \$576 million on October 31, 1957. Net working capital

### GROSS CAPITAL EXPENDITURES IN CURRENT AND CONSTANT DOLLARS



represents the excess of current assets, excluding materials and supplies, over current liabilities, not including maturing funded debt. With cash expenses, taxes and rents averaging over \$750 million a month, and with more than \$400 million of funded debt, largely equipment obligations, maturing within the succeeding 12 months, the industry's cash position in late 1957 was generally regarded as unsat-

isfactory. This situation, it may be noted, is measured at the end of the first 10 months of 1957, and thus does not reflect the effect of wage increases costing some \$300 million annually which became effective on November 1, 1957.

#### Capital Spending and Purchases

Notwithstanding declining traffic and earnings, expenditures made by the rail-

Data of voture on

Table 10: Rate of Return: 1948-1957

	Net ranway	Kate of Leintu ou
	operating income	investment after
Year	(millions)	depreciation
1948	\$1,002	4.3196
1949	686	2.88
1950	1,040	4.28
1951	a 943	a 3.76
1952	a 1,078	a 4.16
1953	a 1,109	a 4.19
1954	a 874	a 3.28
1955	a 1,128	a 4.22
1956	a 1,068	a 3.95
1957 (est.)	a 920	a 3.33
a Includes tax credits (deferrals) resulting from am	ortization of defense facilities.	

Table 11: Capital Expenditures and Purchases: 1948-1957

		Gross capital	Purchases of fuel,
		expenditures	material & supplies
Year		(thousands)	(thousands)
1948		\$1,273,484	\$2,183,331
1949		1,312,200	1,641,406
1950		1,065,842	1,739,908
1951		1,413,995	2,175,859
1952		1,340,912	1,817,750
1953		1,259,797	1,920,481
1954		820,246	1,424,761
		909,521	1,637,075
		1,231,050	1,883,848
	(est.)	1,377,000	1,800,000

roads for additions and betterments to their properties approached record levels in 1957. An estimated \$1,377 million were spent during the year, some \$146 million or 12 per cent more than in 1956. The outlay for roadway and structures declined somewhat from the \$407 million spent on such projects in 1956, but equipment expenditures approximated \$1 billion, an increase of 22 per cent. Equipment expenditures accounted for 73 per cent of the 1957 total while expenditures for roadway and structures accounted for 27 per cent.

The total capital outlay in 1957 was the second highest on record, exceeded only by the \$1,414 million spent in 1951. Capi-

tal expenditures have exceeded one billion dollars in eight of the 12 post-war years, and have averaged \$1.2 billion in the past 10 years. Unfortunately, however, buying power of the railroad dollar has been so weakened by price inflation that the near-record \$1,377 million spent for capital improvements in 1957 was actually worth less than much smaller amounts spent in many prior years.

Purchases of fuel and other materials and supplies declined from \$1,884 million in 1956 to approximately \$1,800 million in 1957. The decline resulted from trimming of inventories in a period of reduced earnings as well as from reduced traffic. The physical volume of purchases showed

a greater relative decline than did dollar volume, owing to increases in unit prices, most notably in iron and steel products.

#### **Equipment Trends**

Owing to a combination of circumstances, the over-all equipment situation in 1957 was the best in 15 years. Compared with 1956, equipment demand was substantially reduced, while equipment supply was either greater, as in the case of freight cars and locomotives, or only slightly reduced, as in the case of passenger-train cars. The number of new freight cars placed in service in 1957 was the second highest in 30 years, and more new locomotive units were installed than in any of the previous three years. Installation of new passenger-train cars, on the other hand, was at a post-war low, the lowest, in fact, since 1933, except for the World War II.

Freight cars. Production of new freight cars in 1957 increased sharply for the third successive year. Benefiting from an improved supply of steel and other components and from the high level of orders on builders' books since 1955, the number of new cars installed was the highest since 1948 and was greater than the number installed in any other year since 1925. The installation of approximately 89,000 new freight cars by the Class I railroads in 1957, while only about 50,000 old cars were retired, resulted in an increase of nearly 40,000 units in total freight car ownership during the year. About 740,-000 cars, or 42 per cent of present freight car ownership of the Class I railroads, have been installed new in the 12 years since World War II.

Considering the downward trend of traffic and earnings in 1957, the backlog of freight cars on order held up remarkably well. Approximately 40,000 additional cars were ordered by Class I railroads during the year, and 55,000 were on order at the year's end. Thus, the outlook is that freight car ownership will be maintained at about the present level in 1958.

As the result of an increase in the bad order ratio, from 4 per cent at the beginning of 1957 to about 5 per cent at the end of the year, the increase in serviceable freight car ownership was about 20,000 less than the increase in total ownership. Nevertheless, the servicable ownership at the close of 1957 was higher than it had been since mid-year 1954.

No freight car shortage of serious proportions occurred in 1957. The maximum shortage was 3,273 cars per day reported for the week ended August 10, which compares with a 1956 maximum of 18,951 cars a day in the week ended September 29. The maximum shortage in 1957 was the lowest annual maximum reported in any year since 1942.

Table 12: Ownership Trends-Cars: 1951-1957

	Ownership	New cars	New cars
	at end	installed	on order at
Year	of year	during year	end of year
	Freight cars a		
1951	1,751,731	84,218	104,831
1952	1,756,700	63,748	67,138
1953	1,776,017	67,548	27,678
1954	1,735,553	28,405	13,624
1955	b 1,700,253	35,738	135,293
1956	1,707,683	59,768	103,535
1957 (est.)	1,747,000	89,000	55,000
	Passenger-train cars c		
1951	43,598	183	152
1952	42,167	200	420
1953	40,755	348	449
1954	38,875	389	396
1955	37,597	444	394
1956	35,636	411	252
1957 (6-mos.)	34,869	48	254

a Excludes railroad-controlled private refrigerator car lines.

b Subsequently revised to 1,694,097 due to reclassification of railroads effective January 1, 1956.

c Includes Pullman Company.

Table 13: Ownership Trends—Locomotives: 1951-1957

		Diesel-		Electric	
		electric		and other	Total
Year		(units)	Steam	(units)	(units)
		Ownership at en	d of year		
1951		17,493	21,747	796	40,036
1952	*******	20,492	16,078	773	37,343
1953		22,503	11,787	719	35,009
1954		23,531	8,650	691	32,872
1955		24,786	5,982	661	31,429
1956	******	26,081	3,714	638	30,433
1957	(est.)	27,200	2,500	620	30,320
		New units installed	during year		
1951		3,490	18	6	3,514
1952		3,035	19	8	3,062
1953		2,122	1.5	4	2,141
1954		1,110		16	1,126
1955		1,070	**	27	1,097
1956		1,198	**	12	1,210
1957	(est.)	1,300	* *	4	1,304
		New units on order a	t end of year		
1951		2,186	19	2	2,207
1952		914	1.5	29	958
1953	*******	546		25	571
1954		483		10	493
1955	******	827		27	854
1956	*********	780	**	34	814
1957	(Dec. 1)	458	**	30	488

Passenger cars. The trend in ownership of passenger-train cars continued downward in 1957, as it has in each year since 1945. During the 12 post-war years the number of passenger-train cars has declined by about 13,000 units, or more than one-fourth, and virtually all of this loss has been in passenger-carrying cars. The loss has occurred despite the installation of about 6,200 new cars in the same period.

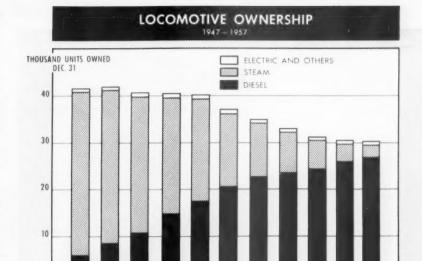
Construction of new conventional type passenger-cars virtually ceased in 1957. Of the 48 new cars installed in the first half of the year, 12 were self-propelled cars, 17 were suburban type coaches, and 5 were Talgo type coaches. The total of 254 new cars on order on July 1, 1957, included 36 multiple-unit suburban cars, while most of the remainder consisted of head-end equipment. With their principal passenger trains already equipped with modern cars, and passenger traffic rapidly dwindling, it appears that most railroads are carefully appraising current trends in passenger travel before investing additional scarce capital in what may prove to be unprofitable services.

Locomotives. In 1957, for the first time since World War II, there was almost an even balance between installation and retirement of locomotives. Based on present estimates, total ownership of locomotives showed a decrease for the year of about 100 units, but from a standpoint of operating utility, the installation of 1,300 new units more than offset the retirement of a slightly larger number of old units.

Partly because of the traffic decline, there was no appreciable shortage of motive power at any time during the year, although the margin of surplus serviceable power during peak traffic periods was only slightly greater than during those periods in 1955 and 1956 when motive power shortages had been experienced.

The backlog of new locomotives on order declined through most of 1957, but several large orders were placed in the waning months of the year.

The proportion of total services performed by diesel locomotives continued to grow in 1957, and the steam proportion showed a corresponding decline. In the first nine months, diesels handled nearly 92 per cent of the gross ton-miles in freight service, more than 92 per cent of the passenger-train car-miles, and accounted for more than 95 per cent of the yard switching locomotive-hours. Corresponding proportions for steam locomotives were less than 6 per cent in freight service, barely one per cent in passenger service, and less than 4 per cent in yard service. Compared with 1956, the steam proportions were down by more than onethird in freight and yard services and more



than one-half in passenger service.

#### **Operating Efficiency and Economy**

Although declining traffic volume has a naturally adverse effect upon the efficiency of railroad operations, railroads in 1957 maintained or surpassed previous high records in significant operating averages that measure operating efficiency and economy. Such gains reflect continuing plant improvements and technological ad(Continued on page 72)

Table 14: Per Cent of Service Performed, by Type of Power: '46-'57

52

50

53

Туре	Road service,	Road service,	Yard
and year	freight	passenger	service
Steam:			
1946	88.15%	78.24%	69.17%
1952	32.61	21.83	22.01
1957 (9 mos.)	5.68	1.17	3.85
Diesel:			
1946	9.73	15.28	29.46
1952	65.52	71.53	76.72
1957 (9 mos.)	91.74	92.48	95.52
Other:			
1946	2.12	6.48	1.37
1952	1.87	6.64	1.27
1957 (9 mos.)	2.58	6.35	0.63

Table 15: Freight Service Averages: 1946-1957

	Average train speed (m.p.h.)	Net ton-miles		Gross ton-
Year		Per loaded car-mile	Per train-mile	miles per train-hour
1946	16.0	31.3	1,086	37,057
1949	16.9	31.4	1,138	42,346
1952	17.6	32.5	1,296	49,113
1956	18.6	33.0	1,420	57,012
1957 (9 mos.)	18.8	33.4	1,447	59,026

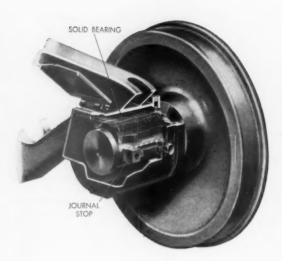
Table 16: Passenger Service Averages: 1946-1957

Year	Average train speed (m.p h.)	Passenger-miles per car-mile	Car-miles per train-mile	Car-miles per train-hour
1946	35 5	24.7	9.5	338
1949	37.0	18.0	9.2	341
1952	38.3	18.1	9.8	375
1956	40.0	18.1	9.9	397
1057 (0.mas )	40.1	18.3	9.8	392

## It's a fact...

that MAGNUS R-S JOURNAL STOPS can cut total bearing operating costs to less than 13 cents per car day!

Here's the low-cost way to get better bearing performance fast\_save almost \$35 per year now on every freight car equipped with Journal Stops



Railroads using R-S Journal Stops today save about \$35.00 per car year in reduced operating costs alone—fewer hot boxes, longer bearing and axle life, and reduced service attention. They save the complete cost of the R-S Journal Stops, including installation, in less than 3 years—bring the total cost of solid bearing operation down to less than 13¢ per car day.

That's just one of the facts about low-cost solid bearings with R-S Journal Stops — proved now on over 5000 cars in service. Potential savings are even greater. That's because R-S Journal Stops stabilize the bearing assembly, give the low-cost solid bearing a chance to work at optimum efficiency. That cuts truck maintenance costs all along the line. It

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assures the practicability of 3-year repack intervals and reduces the requirements for an effective rear seal.

And with R-S Journal Stops you still have all the advantages which low-cost solid bearings bring to railroad rolling stock. You can take the maximum load, make the fastest schedule. You save excess dead weight and get lowest possible running resistance in pounds per ton. Best of all, you'll be sure of the kind of bearing performance you want at a price you can afford to pay.

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**EXAMPLES OF ANNUAL SAVINGS IN BEARING MAINTENANCE WITH R-S JOURNAL STOPS** 

Description	Without Stops	With Stops	Savings
Repairing Hot Box Set-Outs	\$9.05	\$0.91	\$8.14
Damage to Equipment	2.01	.20	1.81
Fires Due to Hot Boxes	.29	.03	.26
Cut Journals	1.35	.34	1.01
Defective Brgs., Routine Insp	2.69*	1.35	1.34
Routine Yard Inspection Material—Not Included Above	40.82	24.11	16.71
<b>Defective Bearing Replacements</b>	4.36*	2.18	2.18
New Axles	3.35	.84	2.51
Spring Packing Retainers	.46	.00	.46
тот	AL SAVI	NGS :	\$34.42

\*Technical Advisory Committee figures. Other figures in this column based on 1954 costs as determined by AAR.

RIGHT FOR RAILROADS
...In performance...In cost



Subsidiary of NATIONAL LEAD COMPANY

(continued from page 69)

vances, such as greater tractive effort of locomotives, new signalling and communications systems, and modernized classification yards, which speed the movement of traffic between and through terminals. These factors have been the principal weapon with which the carriers have met the forces of inflation in post-war years.

Operating statistics for the first 9 months of 1957 indicate that new records will be established in each of the four categories shown in Table 15-freight train speed, load per car, tons per train. and gross ton-miles per train-hour. The last-named average, which combines both train weight and train speed, has set a new record in each of the post-war years. It is today nearly 60 per cent greater than it was in 1946. Freight train speed averaged 18.8 miles per hour in the first 9 months of 1957, just topping the previous record of 18.7 miles per hour set in 1954. Average train speed was 17.5 per cent higher in 1957 than it was in 1946 despite an increase of 33.2 per cent in average train

Passenger service performance averages shown in Table 16 show less spectacular gains than freight service, due chiefly to the sharply downward trend of passenger travel. Passenger train average speed, 40.1 miles per hour for 9 months of 1957, appears to have set a new record for the twelfth consecutive year. This upward trend reflects not only plant improvement but also continuing curtailment of local and branch line trains. Passenger-miles per car-mile increased slightly in 1957 over 1956, while car-miles per train-mile declined. Car-miles per train-hour, an indicator of both train length and train speed, fell slightly below the record high established in 1956.

Miles per active freight locomotive per day declined slightly in 1957, reflecting a more adequate supply of motive power in relation to traffic requirements. The 1957 (9 months) average of 147.3 miles per day was 1.8 miles under the all-time high record established in 1956. Passenger locomotive-miles per active locomotive-day reached a new high for the ninth consecutive year. The 9-month average of 339.7 miles in 1957 was 53 per cent higher than the average for the first post-war year, 1946. Average mileage per freight

car per day of 47.5 in 1957, while slightly less than in the previous year, compares favorably with other of the better postwar years.

#### Railroad Research

A noteworthy development in 1957 in the constantly expanding field of scientific research in the railroad industry was the comptetion and placing in operation of a new Engineering Laboratory at the Association of American Railroads' Research Center on the campus of the Illinois Institute of Technology at Chicago. This research installation provides valuable technical services to the railroads, and works in close cooperation with the technical staffs of the member roads of the association as well as with scientific, commercial and governmental groups outside the railroad industry.

On October 16, 1957, the Franklin Institute of Philadelphia honored the railroads for their research activities by awarding the association the Henderson Medal in recognition of achievements in the field of railway engineering. The Institute said research efforts of the association have resulted in more dependable equipment and tremendous savings in the operation of railroads, all of which are reflected in greater safety and reduced transportation charges for the American public.

#### Legislation

The first session of the 85th Congress was active with respect to legislative matters affecting the railroad industry. The following are more important bills enacted or considered:

"Cabinet Committee bills." Although omnibus bills again were introduced to implement the several recommendations contained in the Report of the Presidential Advisory Committee on Transport Policy and Organization, no hearings were held on them. However, as noted subsequently, some of the matters included in the omnibus bills were dealt with separately; for example, the fourth section circuity bill and the redefinition of contract carriage. Also, hearings were held before the Subcommittee on Transportation and Communications of the House Committee on Interstate and For-

eign Commerce on bills limited to the competitive rate-making proposal, which would so amend the Interstate Commerce Act as to provide that the ICC in the exercise of its power to determine and prescribe just and reasonable rates shall not consider the effect of such rates on the traffic of any other mode of transportation; or the relation of such rates to the rates of any other mode of transportation; or whether such rates are lower than necessary to meet the competition of any other mode of transportation.

Section 22 rates. Proposals to repeal reduced rates on government traffic under Section 22, except in times of war or national emergency, were not enacted. Action was completed (Public Law 85-246) to provide that copies of Section 22 tenders and quotations are to be submitted to the ICC for public inspection and that Section 5a of the Interstate Commerce Act (the Reed-Bulwinkle amendment) shall continue to apply with respect to carrier agreements relating to rates established under Section 22. This provision of the act was intended to meet a situation arising from a decision rendered July 5, 1957, by the United States District Court for the District of Columbia. The court held that Section 5a did not apply with respect to establishment of rates under Section 22.

Fourth Section circuity bill. Public Law 85-99 enacted the so-called circuity bill, amending Section 4 (1) of the Interstate Commerce Act so as to permit carriers operating over an indirect line or route to meet the charges of the same type of carrier operating over a more direct line or route to or from competitive points without specific authorization of the ICC, subject, however, to the other standards of lawfulness set forth in the Interstate Commerce Act. Enactment of this bill eliminates a great volume of paper work. substantial delay in effecting essential rate adjustments, and considerable expense and complexity in freight tariffs.

Redefinition of contract motor carriers. By redefining contract carriage by motor vehicle, Public Law 85-163 makes more clear the line of demarcation between contract and common carriers, thus affording relief from the effect of a recent Supreme Court decision which held that contract carriers might without limit solicit contracts within the scope of their permits. The new law gives the ICC authority to limit the number of contracts which a contract carrier may have.

Filing of contract carrier rates. A further step to make more equal the competition between common and contract carriers and to help prevent further weakening of the common carrier segment of transportation was taken in Pub-

Table 17: Daily Mileage, Locomotives and Cars: '46-'57

	Active freight	Active passenger	Serviceable
Year	locomotives	locomotives	freight cars
1946	115.9	221.8	45.2
1949	112.5	228.5	42.9
1952	126.8	266.1	46.2
1956	149.1	325.6	48.3
1957 (9-mos.)	147.3	339.7	47.5

lic Law 85-124. This requires contract carriers by motor vehicle to file with the ICC their actual rates or charges for transportation services. It is provided that any contract carrier serving only one shipper and having rendered continuous service to such shipper for not less than one year is permitted to continue to file only its reasonable minimum rates and charges rather than its actual rates and charges, unless othrwise directed by the ICC in the public interest.

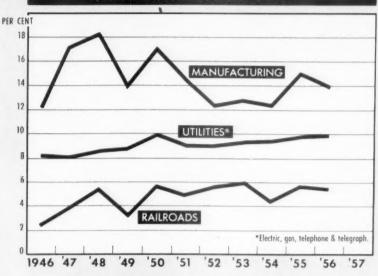
Capital stock modification. Section 20 (b) of the Interstate Commerce Act was amended by Public Law 85-150 to provide for consideration in railroad stock modification plans, of the assents of controlled or controlling stockholders. This amendment will eliminate an inequity that had existed for a number of years.

Transportation excise taxes. In late 1956 hearings once more were held before the Subcommittee on Excise Taxes of the House Ways and Means Committee to consider repeal of excise taxes on transportation for hire of persons and property. The diversion of business to private transportation to escape these taxes and the serious threat this poses to the forhire transportation industry was carefully developed and fully explained. Although numerous bills designed to accomplish repeal of these taxes were introduced in the first session of the 85th Congress, none was enacted.

Railroad Retirement. Several bills were introduced to amend the Railroad Retirement Act, the Railroad Retirement Tax Act and the Railroad Unemployment Insurance Act. Proposals by the labor organizations would have provided further substantial increases in retirement benefits over and above the 10 per cent increase granted in 1956, increased retirement taxes paid by employers and employees, and increased unemployment and sickness benefits financed entirely by the railroads. The proposed increases would have required the railroads to pay additional retirement and unemployment taxes of more than \$262 million a year. Proposed amendments to the Retirement Act would have required increased contributions on the part of employees as well, but such increases would be substantially offset by a companion proposal of the labor organizations which would exempt retirement contributions of employees from income tax. Other bills, supported by the railroads would have amended only the Unemployment Insurance Act to provide more realistic eligibility requirements and to relate the benefits paid to the employee's actual pay-loss rather than to his gross pay.

Hearings were held but none of these bills was reported by the committees con-

# RATIO OF NET INCOME TO NET ASSETS OF LEADING CORPORATIONS



Source: First National City Bank of New York

sidering them. Neither was provision made for financing the increased retirement benefits enacted in 1956, although the President had signed that legislation with the understanding that a program for that purpose would be progressed in the 1957 session of the Congress and although the railroads agreed in the course of the 1957 hearings to assume their share of the cost.

Other measures not enacted. Among other matters receiving attention but not acted upon in the first session of the 85th Congress were the following: 30-per cent reserve requirement incident to change from retirement to straight-line depreciation accounting; deductibility of vacation pay accruals for Federal income tax purposes; limitation on the scope of the socalled agricultural commodities exemption in Section 203 (b) (6) of the Interstate Commerce Act; standards and procedures in the preservation or cancellation of competitive through routes for rail carriers, passed by the House but not acted upon by the Senate (H.R. 5384 and S. 2129); the penalty per diem bills, S. 942 and H.R.3626, proposed by the ICC to give it authority to impose charges in addition to normal car-rental per diem charges or mileage rates on a carrier using cars of ownership other than its own during emergency or threatened emergency, when such charges, in the opinion of the commission, would be reasonably calculated to relieve car shortage or threatened car shortage by promoting the expeditious movement, distribution, interchange or return of freight cars; S. 1386, passed by the Senate but not by the House, which would authorize the ICC after hearing to prescribe rules, standards and instructions for the installation, maintenance and repair of power or train brakes.

Equipment financing. On July 24, 1957, in the course of hearings before a subcommittee of the House Committee on Interstate and Foreign Commerce considering car supply matters in connection with H.R. 3626 (penalty per diem bill), President Symes of the Pennsylvania on behalf of 34 Eastern roads proposed establishment of a Federal agency to lease rolling stock to the railroad industry. The plan he described calls for the creation of a new agency with initial capital of \$500 million, which would purchase railroad cars and locomotives and then lease them to individual railroads at rental rates sufficient to make the agency self-supporting. Bills embodying the plan (S. 2906 and H.R. 9597) were introduced near the close of the 1957 session of the Con-

### **Administrative Proceedings**

Administrative proceedings and investigations during 1957, other than those involving rates and fares noted earlier, covered a wide variety of subjects, among them the following:

Passenger deficit. Considerable progress was made in the investigation of the passenger-train service deficit which was instituted by the ICC under Docket No. (continued on page 82)

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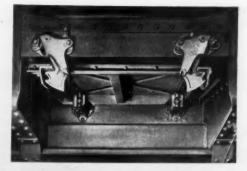


A comparatively simple method of equalizing forces and "balancing" the conventional brake arrangement by replacing the dead lever connection to the truck bolster with the Wine Balancer—connected to the car underframe. A bracket and connector at each end of the center sill flange, engaging the dead lever, balances the brake forces by returning them to the underframe of the car.



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The one-piece, cast steel frame unitizes each individual hopper into a structurally sound, functional assembly which assures positive door fit. The adjustable locks, cast steel hinges, and symmetrical tapered door flange make possible the only adjustable door fit permitting compensation for wear or common irregularities of construction. "Balanced" unloading is assured by dual door operation and a method of controlled flow.



### DROP BOTTOM SPRING HINGES AND ADJUSTABLE LOCKS

Drop Bottom Gondolas equipped with these two Wine products provide the shipper and receiver of the lading with a positive closure and afford a fast, economical one-man operation, with selective single or multiple opening of doors.



# CONTINUOUS LADING BAND

ANCHOR
Wine's continuous offset bar for top-coping applications provides a secure anchor for lading bands every 71/4" of its entire length. Permits the use of all types of banding material.



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The complete drop end combination from operating and security standpoints! Interlocked corners provide rigidity to keep the sides from spreading under load. The balancer incorporates the hinge function . . . permits a one-man, time and labor saving closure.



### UNIVERSAL LADING **BAND ANCHORS**

Easily applied on all flat cars and gondolas, the Wine Universal Type Anchor features 360° rotation for tie-ins from any direction. Versatility of use permits welding on coping at important locations as well as mounting in the floor. Drop flush when not in use.



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The adjustment feature allows compensation for construction differences and readily permits adjustments necessitated by wear. Wine Adjustable Hopper Locks are adaptable to built-up, structural hopper openings as well as cast steel frames.



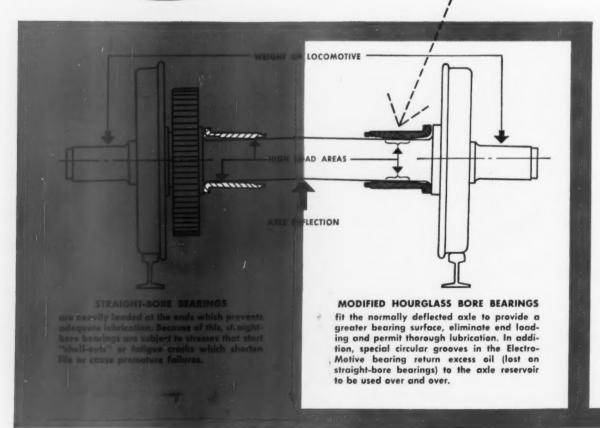
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Electro-Motive modified hourglass bore design compensates for axle deflection to eliminate end-loading and provide better lubrication. Result: A longer service life than straight-bore bearings.





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Among the plan's many features is a new and generous "scrap allowance" for any worn traction motor support bearings you turn in on the purchase of Electro-Motive hourglass bearings.

Before you order traction motor support bearings again, be sure to check the advantages of the Electro-Motive hourglass bearing and the savings you can get under our new sales-exchange plan. For complete details on both, see your Electro-Motive representative.

Nine convenient on-line warehouses for fast delivery on parts and Unit Exchange components.

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# ELECTRO-MOTIVE DIVISION GENERAL MOTORS

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International Steel has been "designing out" corrosion and eliminating service failures through proper construction of component parts; now their "depth" research goes even deeper.



International Steel research begins with failures such as those pictured across the top of these pages. The research deals with failure causes—not superficial, but basic causes. For instance, the condition of the above car is not due to "corrosion" but bad design—antiquated construction.

# The Astonishing Story of "Bruised Metal"\*

At the outset of World War II more ships than we cared to admit, cracked open on the ways—new ships launched straight to the bottom. At that time, research in steel "brittleness" had been going on since the mid thirties—but this type of failure stepped up research considerably.

Today International Steel is able to design against—and fabricate against the problems caused by "notch brittleness" in steel.

Punched holes, sheared edges, abrupt bends—in other words definite geometric discontinuity—a notch, section change or other changed area that is not completely eliminated by "minimum rigidity" welding—are all areas which become subject to "brittle fracture" under service conditions.

Localized "cold working" by "bruising" resulting from accidental impact loading such as dropping the steel or striking other materials during handling, is a direct invitation to brittle fracture in service.

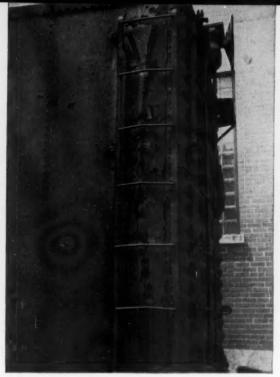
International Steel component parts and structures are quality controlled to prevent brittle fracture. The *knowledge* of this problem is International's best defense.

Greater care in choosing design details, in the selection of materials and in procedures of workmanship, fabrication, supervision and inspection are all part of the International precision process.

"A freight car is only as modern as the research and integrity that goes into its components."

For the complete study of "notch brittleness" and other failure causes, send for "Failures of Structural Components of Railroad Freight Cars."

INTERNATIONAL STEEL COMPANY RAILWAY DIVISION • EVANSVILLE 7, INDIANA



Here, again, International's research reveals that the basic fault is not rough handling or corrosion, but simply failure to design against such failures. Corrective design and proper construction eliminate such failures.



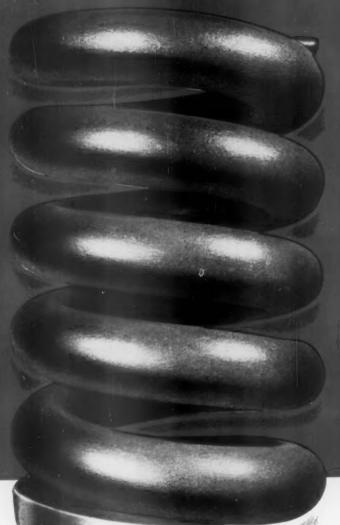
The underframe is a classic example of an International development through "depth" research and corrective design. These underframes have the failure cause "designed out" of them. As a result—no International Steel underframe has ever failed.

# the Unit Load Car

Although International Steel designs and fabricates freight car components, research into these parts often leads to revolutionary design such as the now famed "Unit Load" Car.

Components for this car are now being fabricated at International Steel. Soon thousands of them will be assembled at various shops throughout the country—and shippers will benefit by ten hours of loading time at each end of the trip in addition to the advantage of safely shipping unbarricaded LCL shipments—by the carload!





# Longer Service Life

All ASF Extended Life Springs are shot-peened—which cold-works surfaces and more than doubles the life of the spring.



...before you specify truck springs!

# Better Performance

A new heat-treating process makes ASF Extended Life Springs far better able to maintain load-carrying capacity—without permanent set.

# Lower Cost

ASF Extended Life Springs are now available at no increase in cost over conventional springs. Because they last over twice as long, they cut your spring costs per car mile.

E-X-T-E-N-D-E-D L-I-F-E SPRINGS

A contribution to railroad progress...through research by

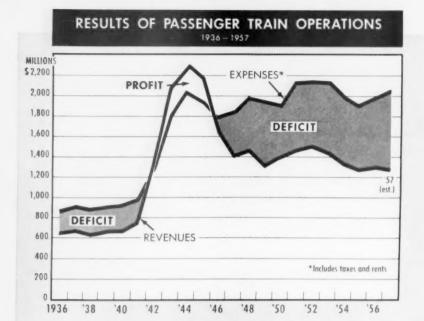
AMERICAN STEEL FOUNDRIES

Prudential Plaza, Chicago 1, Illinois

Canadian Sales: International Equipment Co., Ltd., Montreal 1, Quebec

Other Foreign Sales: American Steel Foundries, International, S.A., Chicago.





(Continued from page 73)

31954 on March 19, 1956. Hearings were held and are to be continued in 1958.

In the initial stages there has been much emphasis on costing methods and formulas in determining the magnitude of the passenger-train service deficit, as well as its causes. Studies based on different approaches from those which have long been used by the commission were submitted by the railroads and by the Aeronautical Research Foundation of Cambridge, Mass., which had received a research grant from the AAR to make an independent statistical study of the cost and deficit problem. While the extent of the deficit remains in question, both of these studies as well as the commission's cost apportionment, though differing in approach and methods, indicate the deficit is substantial in amount.

The National Association of Railroad and Utilities Commissioners, which has participated actively in this investigation, published in Ocober 1957 the sixth in a series of reports from its special committee on cooperation with the ICC in the study of the railroad passenger deficit problem. The committee report recommended to the association that it continue fully to participate in the ICC investigation with the two-fold purpose of (1) attempting to derive "genuine benefit" from the proceeding, and (2) advancing and protecting the interests of the state commissions in this field.

Reclassification and unification. The past two years have witnessed a marked

reduction in the number of Class I railroads in the United States, as classified for statistical purposes by the ICC and there was in 1957 renewed discussion of possible economies attainable through consolidation of railroads and unification of facilities.

Two years ago, at the close of 1955, there were 129 Class I line-haul railroads. This number was reduced to 121 by a change in the commission's classification of railroads effective January 1, 1956, and was further reduced to 116 when 6 Class I companies in the Missouri Pacific System were reorganized into one company. By the end of 1957, as a result of the merger of the Chicago, St. Paul, Minneapolis & Omaha into the Chicago & North Western, effective January 1, 1957, the abandonment of the New York, Ontario & Western effective March 30, and merger of the Nashville, Chattanooga & St. Louis into the Louisville & Nashville effective August 30, the number of Class I roads had been reduced to 113.

Further railroad mergers or consolidations are presently in various stages of development. Acquisition of control of Central of Georgia by the St. Louis-San Francisco has been approved by the commission but is being contested in the courts. Atlantic Coast Line's purchase of the Florida East Coast, and joint control of the Toledo, Peoria & Western by the Santa Fe and Pennsylvania are also involved in litigation. Acquisition of the Litchfield & Madison by the Chicago & North Western was authorized by the

commission on December 30, 1957, and was consummated on January 2, 1958.

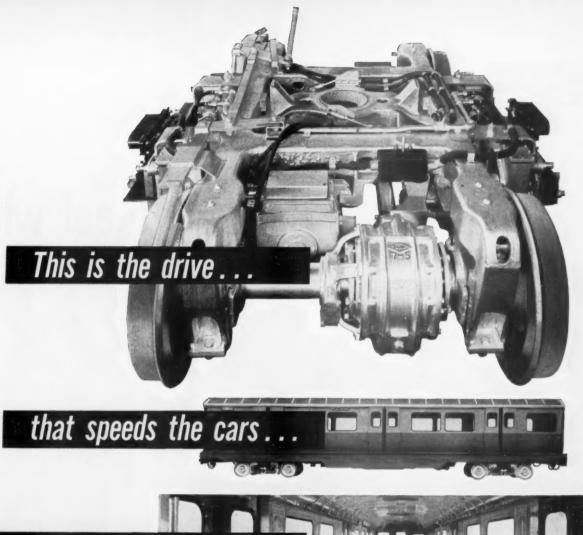
Other roads are presently involved in studies looking toward possible unification. Among roads prominently mentioned in this connection have been the Burlington, Great Northern, Northern Pacific and Spokane, Portland & Seattle; the Missouri Pacific and Texas & Pacific; and most recently and in some respects most notably the New York Central and Pennsylvania.

In studies involving unification of facilities, the Delaware, Lackawanna & Western and the Erie railroads have already consolidated certain terminal facilities in the New York Harbor area and have completed plans for common use of considerable main line trackage. Unification studies involving these two roads and the Delaware & Hudson have also been announced.

Per diem. Acting on complaints in Docket Nos. 31774 and 31824, the ICC, Division 2, in an order dated March 7, 1957, required that the Section 5a agreement relating to procedures for determining per diem rates and certain other charges, be modified to provide for a representative of the American Short Line Railroad Association to be a member of the general committee of the railroads for consideration of such matters. Upon reconsideration at the request of complainants and of the Department of Justice, the commission in a report and order made public on November 20, 1957, affirmed the findings of Division 2, and allowed the railroads until January 20, 1958, to modify the Per Diem Agreement in Section 5a Application No. 7 in accordance with the affirmed findings. Such modification was being progressed by the railroads at the close of the year.

Litigation involving the commission's decision in Docket No. 31358 was pending before the United States District Court for the District of Massachusetts at the close of the year. In this proceeding the commission under date of October 17, 1955, had found the freight car per diem rates of \$1.75, \$2.00 and \$2.40 to be reasonable compensation during the periods each was in effect. On November 21, 1956, reconsideration by the commission having been sought and denied, the defendants in Docket 31358 filed a complaint in the District Court against the United States and the Interstate Commerce Commission, asking the court to enjoin, set aside and annul the commission's report and orders. Oral argument was held before the court at Boston on December 2, 1957, but by the end of the year no decision had yet been rendered.

Demurrage charges. The ICC, in a re-(Continued on page 87)



# that serve the people of Boston

The Spicer Model 7-5 Traction Motor Drive now is in use in 50 new Pullman-Standard traction cars serving the Metropolitan Transit Authority of Boston, Mass.

This is a new Spicer Drive, developed to take advantage of the weight savings that are being incorporated into Rapid Transit car design through the use of lighter weight, higher speed electric motors. The drive can accommodate hypoid gearing in ratios from 5.67 to 1 up to 9 to 1. The unit is furnished completely assembled, requiring no field adjustment, bearing alignment, or gear setting when installed.

More than 13,000 Spicer Drives of several types are now in use throughout the world. Write for technical bulletins, stating your requirements.

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Many of these products manufactured in Canada by Hayes Steel Products Limited, Merritton, Ontario



MAKING TEST DATA COMPLETE ...

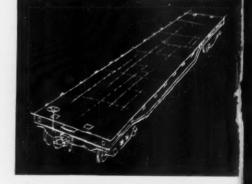
# All types of cars now roll on the new steel wheel...

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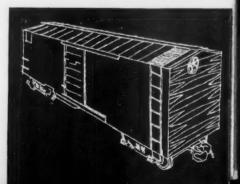
Railroads are now using thousands of new Griffin EQS steel wheels...under practically all types of service conditions.

The record of service has been outstanding...
it is proving, in the most conclusive possible way,
longer life and better wear... another
way of saying lower costs per car mile.

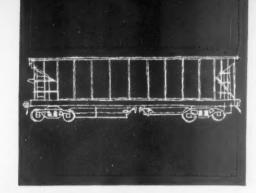
The Griffin EQS wheel comes in fewer tape sizes... accurate in all other dimensions to .020" tolerance ...almost perfectly balanced...and with strong, uniform flanges and rims.



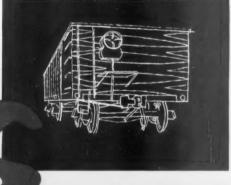
Give the "green" to GRIFFIN and watch your costs go down!



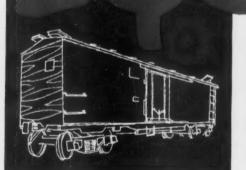


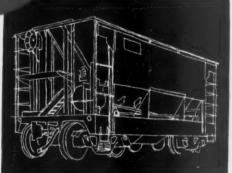


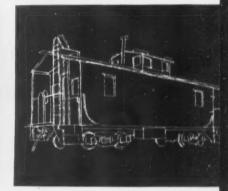


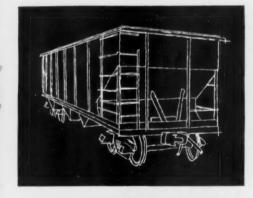


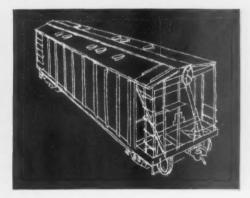
ELECTRIC QUALITY STEEL

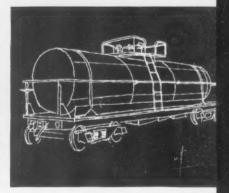


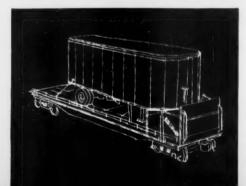










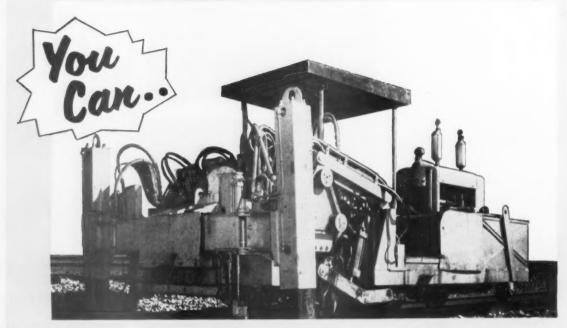




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The Kershaw Spot Tamper

# Maintain Present Operating Ratio Despite Declining Revenue ... and Higher Costs!

You can do it, too, with the Kershaw Spot Tamper. Here's how:

The Kershaw Spot Tamper enables you to maintain surface on from 75 to 150 miles of track a year. The Kershaw Spot Tamper and a Kershaw Foreman's Sight Car operated by a four man gang can maintain surface on four, five, or even six times the track now being maintained by present methods and gangs.

This, of course, will cut your present track maintenance costs drastically, and help you maintain your normal operating ratio despite rising costs and declining revenues.

By using a Kershaw Spot Tamper on your track, production goes up, the number gangs are reduced and your track maintenance costs go down.

How are you going to pay for a Kershaw Spot Tamper? With the money you save in maintenance costs! It's as simple as that.

For additional details, write or call....



(Continued from page 82)

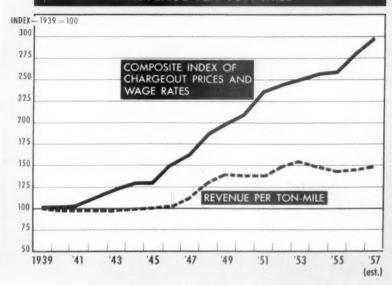
port and order announced June 7, 1957. in I.&S. Docket No. 6646 directed the railroads to cancel their proposed increased demurrage charges without prejudice to filing new schedules conforming with the commission's findings. The railroads had proposed charges of \$4 a day for the first two days after "free time," \$7 a day for the next two days. and \$10 a day thereafter. The commission authorized the railroads to file schedules providing for \$4 a day per car for the first four days beyond "free time" and \$8 a day thereafter. The railroads also were authorized to include Saturdays, Sundays and holidays in computing the charges after a car has been held four working days, or two days beyond "free time." The new demurrage rules and charges became effective on interstate traffic, and in some states, on July 1,

Traffic surveys. The Bureau of the Census, Department of Commerce, announced on November 25, 1957, initiation of a survey of the transportation of fresh fruits and vegetables in this country from shipping points in or near the growing areas to market. The basic data are being obtained from a sample of sales invoices, shipping advices, or other records of individual transactions which show the points of origin and destination, means of transport, and quantity of product sold or shipped. This project is the first of four "shipper surveys" to be undertaken within the next year, all underwritten by the Association of American Railroads. Results are to be published in official reports of the Census Bureau.

Safety matters. Several proceedings before the ICC in 1957 involved safety matters and accident reports. Over a period of several years the commission has been considering a revision of its rules governing monthly reports of railroad accidents. On November 23, 1956, the commission issued revised rules to be effective January 1, 1957, and on July 25, 1957, issued a further order making effective September 1, 1957, certain additional changes in the rules. A new rule was added that Form T reports are for the information of the commission and shall be open to public inspection only if the commission is satisfied that such inspection will not result in a violation of Section 4 of the Accident Reports Act and will contribute to the promotion of safety in railroad operations.

On February 28, 1957, the commission instituted an investigation into the reasonableness and lawfulness of its Locomotive Inspection Rule 203 and its current interpretation and application. Rule 203 provides that "Each locomotive and

## TRENDS IN UNIT COSTS AND AVERAGE REVENUE PER TON-MILE



tender shall be inspected after each trip, or day's work . . . " Railroads generally have interpreted "trip, or day's work" to mean the entire trip of a locomotive from its starting point to the terminal where it is finally detached from its train, even though it has operated through one or more intermediate "crew-change" terminals. Until recently this interpretation has also been accepted by the commission's Bureau of Locomotive Inspection. Hearing in the matter has been set for January 15, 1958. In another proceeding, Ex Parte No. 174, the commission has proposed certain changes in rules governing the inspecting and testing of locomotives other than steam.

On January 3, 1957, the commission denied, on grounds of lack of authority, a petition by certain employee groups for the promulgation and enforcement of regulations with respect to power brakes. As noted elsewhere, the commission has sponsored bills to give it such authority.

Communications. During the year the Federal Communication Commission initiated several proceedings relating directly or indirectly to the expanding use of radio by the railroads.

User charges. The development of compensatory charges for the use of transportation facilities and services provided by the government was the subject of increasing attention during the year.

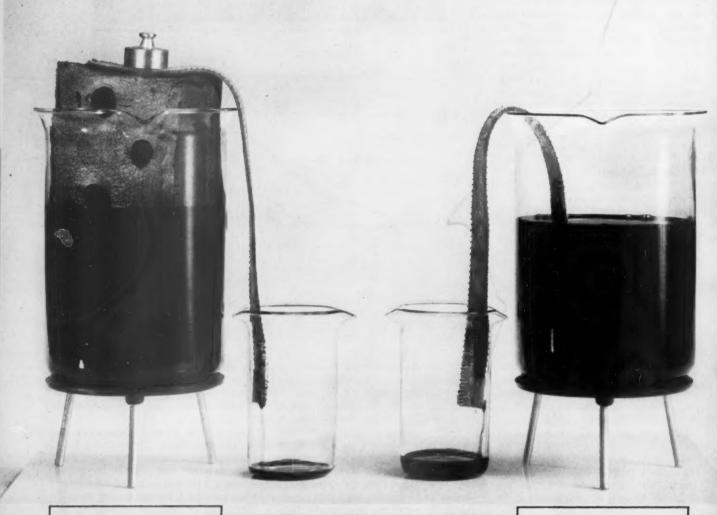
The Bureau of Public Roads sought the views and recommendations of interested parties with respect to its study of highway cost responsibility as a basis for the determination by Congress of an equitable Federal highway user tax program, such study being required by Section 210 of the Highway Revenue Act of 1956.

In September the tolls committee of the St. Lawrence Seaway Development Corporation held preliminary hearings to consider principles and methods for determining toll charges for use of this facility when completed. Further hearings on specific levels of tolls are expected to be held in the spring.

At hearings in March a subcommittee of the House Committee on Appropriations called upon the Department of Commerce and the Civil Aeronautics Administration to prepare and submit recommendations for charges to be paid by users of airway and airport facilities provided by Federal expenditures.

On November 27, 1957, it was announced that the Department of Commerce, at the request of the Bureau of the Budget, has undertaken a study of charges for the use of federally provided navigation facilities on inland waterways. In this connection it was stated that "reexamination of the long established government policy on use of inland waterway facilities without charges appears warranted in view of the fact that the pattern of modern transportation is materially different from that existing when Congressional policy regarding waterway transportation was first adopted."

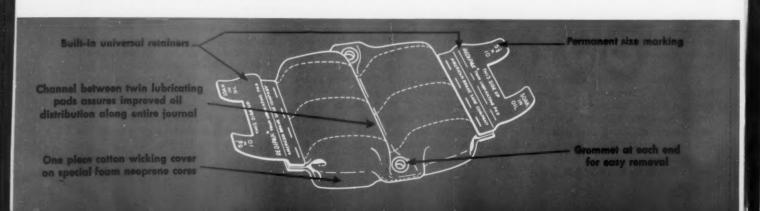
This announcement was preceded by (Continued on page 94)



foamex core

woven cotton cover

Both core and cover wick oil! Both the cotton cover and the Foamex core in Redipak Twin lubricating pads move a steady flow of oil to the journal. The woven cotton cover, unmatched in wicking ability, is lint-free. The foamex core not only provides the proper resilience, but it, too, wicks oil when saturated . . . all adding up to doubly effective lubrication!



# Why Redipak® Twin Pads with firestone\* Foamex provide superior lubrication

Superior lubrication that will effectively control hot boxes is assured with Redipak Twin lubricating pads, because of their unique design and the excellent lubricating properties of their woven cotton covers and Firestone Foamex cores.

Take the Foamex core . . . more than just a mechanical filler, this material, which is produced by Firestone to our physical specifications, actually wicks oil when saturated, holds over five times its own weight in oil, and keeps its shape and resiliency under extremes of temperature.

The wicking ability of cotton hardly needs explaining. When woven into a seamless cover for Redipak Twin pads, the result is a highly efficient wicking material that will not lint or glaze. Add to these

properties, a unique design that provides superior oil distribution and positive shift prevention and you have Redipak Twin lubricating pads.

\*A special formulation of Foamex is used for Redipak Twin pads.

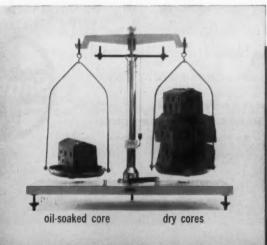


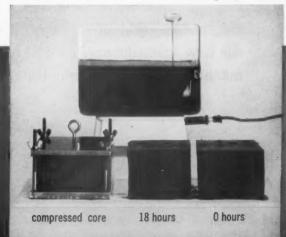
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Redipak's Foamex core holds over 5 times its weight in oil! Redipak Twin lubricating pads hold an amazing amount of oil. Why? Mainly because of the Foamex core with its millions of interconnected cells. One sample of oil-soaked Foamex weighs as much as five and one-half dry samples of the same size... in other words five times its own weight in oil. Thus, the Redipak Twin core provides a generous oil reservoir—even when there is accidental loss of free oil.

Redipak Twins keep their shape: The Foamex cores in Redipak Twin lubricating pads are produced to our physical specifications to resist taking a set under extremes of temperature. In this demonstration, adapted from actual production tests, one of two identically-sized samples has been compressed to 80% of its original height and immersed in oil at 250° F for 18 hours. At the end of that time, there was no difference in height between the tested sample on the left and the untested sample on the right. Despite compression under heat, the Foamex core held its shape.









Where is this train going? To an atomic development laboratory. What is it carrying? Chemicals, metals, delicate instruments, and many of the other things it takes to keep this important laboratory going. How does it get there? On the Santa Fe, America's longest railroad. Now more important than ever because it's moving raw and finished materials essential for the new scientific age, as well as the basic things like steel, machinery, and foodstuffs that America needs every day.

Let us be a partner in handling your freight, too

SANTA FE SYSTEM LINES

Serving the West and Southwest



When a policeman says, "Stop"...he means it. The results are the same with the Improved Fair Anchor... as it positively stops rail creepage and prevents the many destructive forces which interfere with high track standards.

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Each Sealtite bolt and nut is precision designed to do its particular job better. Every Sealtite product is hot forged from uniform special quality steel.



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# FLUSH WITH SURFACE

Sealtite pulls up to a "level with surface" fit without counter sinking.

### PERFECT FIT

Shank diameter thread to head is exact. No air pockets, no corrosion.

### NO SPLINTERS

Sealtite scientific design compresses without raising surface splinters.

## PATENTED FINS

For full bearing strength without tearing or splitting wood.

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Sealtite tapered, beveled edge forms perfect water tight seal.

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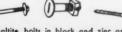
A spinning fit on each bolt offers easy, fast installation.











Sealtite bolts in black and zinc are available with Lock Tight nut No. 2, washer nut or standard square and









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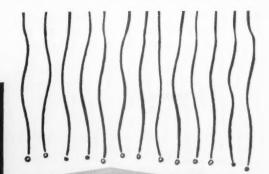
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# the most practical tested lubricator

In general interchange service on roads in all parts of the country, in all temperatures. This on-the-line testing, combined with 39 years of journal box lubrication experience brings you this more efficient lubricator.

# two-way flexibility means security with the Journapak

Journapak is a three-section, reversible, reclaimable lubricator of heavy tufted non-glazing cotton chenille, wrapped completely around three separate resilient blocks of synthetic rubber foam, which absorbs 300% of its own weight of warm oil.

Journapak — designed to eliminate glazing, waste grab and unnecessary yard labor. Journapak combines all efficient advantages found in all other modern lubricators with no sacrificing of lubricating coverage.

"39 years of railroading experience have built SECURITY for you!"

The only reversible journal lubricator that fits contour of standard journal box without distartion of lubricator structure.



AD 957

Security
Railway Products Co.

Exclusive Distributors 120 S. La Salle Street · Chicago, 3 Ill.

(Continued from page 87)

the issuance of Bulletin No. 58-3 dated November 13, 1957, by the Bureau of the Budget, under direction from the President, instructing all agencies of the executive branch of the government to prepare specific legislative proposals "to establish an equitable and uniform government-wide policy on charges for certain government services or property" in order to "promote sounder management of the government's affairs and . . . decrease the cost to the general taxpayer of many services now provided."

"Hot cargo." The ICC on December 18, in a decision involving so-called "hot cargo", ruled that common carriers may not bargain away through labor contracts their statutory obligation to serve the public. Refusal of certain defendant motor carriers to accept and transport interline shipments was found unlawful under the Interstate Commerce Act. The commission held, however, that it had no jurisdiction to rule on the legality of "hot cargo" clauses as such. Such clauses in labor contracts, the commission explained, relate to the rights of union employees to refuse to handle "unfair goods" or the goods of an "unfair company."

### **Transport Competition**

Declines of railroad traffic in the second half of 1957, related particularly to lower levels of activity in heavy industries, brought into sharper focus longstanding competitive handicaps upon the railroads and the harmful consequences of existing conditions of inequality.

It is axiomatic, considering the nature of railroad facilities, operations and costs, that low unit costs and profitable operations can be realized only on the basis of large traffic volumes. Yet ICC data show that railroads' shares of total commercial freight and passenger traffic have steadily declined in recent years—falling in 1956 to a low of 48.2 per cent as compared with 66.6 per cent in 1946 and 55.6 per cent in 1951 as to freight, and also to a new low point of 34.9 per cent of passenger traffic. Current trends indicate that further relative declines in railroad traffic have occurred in 1957.

While the railroads cannot, of course, lay just claim to any fixed share of the total transportation market, it is in the public interest that they should have opportunity to compete on equal terms with the other available methods of transportation. In important respects such conditions of equality do not now exist and have been lacking for many years, with cumulatively adverse effects. The consequences of competitive handicaps upon the railroads obviously become more serious in a period of declining general

business activity and traffic, as at present, than when the economy as a whole is on a rising trend.

To an important extent the competitive difficulties of railroads stem from governmental policies which favor their competitors. While the railroads provide their services as self-supporting and taxpaying business enterprises, agencies of government continue, at taxpayers' expense, to provide competitors of the railroads with highway, waterway, and airway facilities for the use of which inadequate compensation and in some instances none at all is paid. Although the user-compensation principle is now almost universally accepted as sound and necessary, progress in its application has been slow and erratic. Even where use of railroad services has been undermined by the prolonged extension of aids to means of transportation which cannot possibly qualify now as "infant" industries, governmental authorities nevertheless are often reluctant to allow railroads to discontinue services which have already been abandoned in fact by those who have shifted over to subsidized transportation. This is one of the important aspects of the current ICC investigation of the railroad passenger-service deficit problem.

The railroads, as fully regulated common carriers, also continue to be subject to regulatory restraints and standards which were established long ago under conditions very different from those which now prevtail in competitive transportation. Many of their competitors, on the other hand, are largely or wholly free of such controls. This contrast has taken on added significance with the rapid growth of private transportation in recent years. Private transportation is free to come and go, to start or stop, or pick and choose at will, as shippers in their immediate interest decide.

Barge transportation on the inland waterways is predominantly private and beyond the reach of regulations which circumscribe the efforts of the railroads to compete. In the motor carrier field, also, operators subject to ICC regulations account for only about one-third of the total intercity traffic, the rest being private or exempt from regulation. According to a recent report of the commission, between 1950 and 1955 traffic (ton-miles) on main rural roads by private trucks increased 36.5 per cent, while traffic of forhire motor carriers increased only 20.1 per cent. Over the same period, freight traffic of the railroads increased barely 6 per cent. Thus, with respect to transporters of freight on the highways and the waterways, such regulatory controls and requirements as do exist apply to only a diminishing fraction of the whole.

Under these circumstances the regulated railroads require greater freedom to make timely competitive adjustments, especially in regard to unregulated transportation. They also must have reliet from outmoded restrictions upon their use of other kinds of transportation, enabling them to provide more completely integrated transportation services to the public with greater economy and efficiency.

Private transportation also gains impetus because the government continues to contradict sound transportation policy in taxation. Although a strong system of common carrier transportation is regarded as indispensable to the nation's commerce and welfare, there still remain in effect the punitive war-emergency excise taxes on the for-hire transportation of freight and passengers—taxes that can only be penalties on the use of for-hire transportation services.

These governmental policies adversely affect railroad earnings and hence restrict formation of capital funds urgently needed for improvements of railroads plant and equipment. Persistent inflationary trends in the post-war period, reflected in sharply rising costs of labor and materials, have added to these difficulties by further shrinking net earnings. At depreciated dollar values, available earnings do not go as far in financing required improvements. Spiralling inflation has thus exerted pressures that have diminished net earnings and their real worth, have imposed limitations on capital expenditures, and, consequently, have further impaired the means available to the railroads for improvements which would strengthen their competitive position through cost reductions and betterments of service.

### Outlook for 1958

Viewed in the aggregate, the national economy experienced a mild set-back in 1957, although year-end business levels and trends were of more serious import. The big questions facing American industry at the outset of 1958 are (1) how far will the current down-swing go, and (2) when will an up-turn come.

Railroad fortunes in 1958 will be influenced by the course of general business activity and by developments in the broad field of transportation itself. Since it does not appear that improved economic conditions are in prospect, the railroads cannot rely on relief from that source.

Notwithstanding present adverse factors, however, the railroads see an awakening public interest in the nation's transportation problems and, from that, derive an optimistic long-range outlook.

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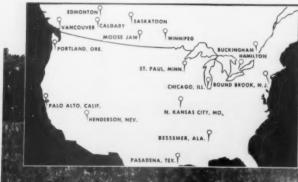
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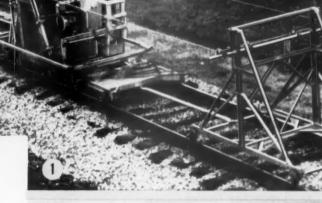
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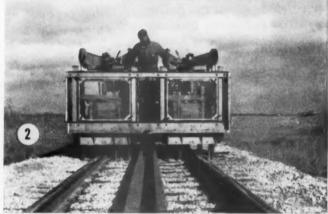
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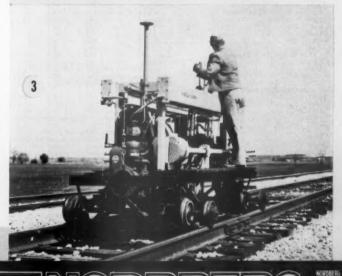
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# AN EXCLUSIVE RAILWAY AGE INDUSTRY SERVICE . . .

# Statistical Review of 1957

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# A CHANGES IN CASH & CURRENT ASSETS

				Cash & Temporary Cash		Total Co	urrent Assets	Total Cur	rent Liabilities		of Current ver Liabilities	
	1957	1956	Dec.	End of Sept. 1957	End of Sept. 1956	End of Sept. 1957	End of Sept. 1956	End of Sept. 1957	End of Sept. 1956*	Dec.		
AT&SF	\$100.040.375	\$101.914.054	- 1.8	\$179.508.681	\$188,884,246	\$89,027,022	\$92,670,058	\$90,481,659	\$96,214,188	- 5.9		
ACL	18,535,521	14,521,638	+27.6	50,923,676	48,766,661	22,512,626	22,087,123	28,411,050	26,679,538	+ 6.5		
B&O	33,489,837	40,767,238	-17.9	113,272,947	114,554,555	88,132,862	77,231,884	25.140.085	37,322,671	-32.7		
B&M	9,486,229	11,754,467	-19.3	26,425,479	30,445,486	23,320,192	22,477,128	3,105,287	7,968,358	-61.1		
CofGa	7,047,659	8,777,740	-19.7	13,695,824	15,441,033	7,695,293	8.780.730	6.000.531	6,660,303	-10.0		
CofNJ	6,732,646	2,205,171	+205.3	17,343,510	18,397,435	9,806,706	11,097,728	7,536,804	7,299,707	+ 3.2		
C&O	62,392,213	67,940,857	- 8.2	128,177,943	131.145.271	86,238,745	88,922,101	41,939,198	42,223,170	6		
C&EI	1,515,190	2,663,343	-43.1	7,695,466	9,537,896	7.771.123	7.613.304	- 75,657	1,924,592	+ .0		
C&NW (incl. C. St. P. M. & O.)	3,992,580	10,010,574	-60.1	44,658,220	53,116,022	44,905,927	44,700,675	- 247,707	8,415,347	+		
CB&Q	44,723,554	46,261,222	- 3.3	85,423,312	84,558,382	39,960,222	42,235,205		42,323,177	+ 7.4		
CGW.	8.119.212	7.944.561	+ 2.2	12,645,554		8,950,461		45,463,090	4.390.864	-15.9		
CMSiPaP	32.041.955				12,068,898		7,678,034					
		35,810,732	-10.5	80,329,234	78,670,349	46,485,688	44,826,689	33,843,546	33,843,660	.0		
CStPM&O includeidn Chicago & Northw	19,880,774	24,544,502	-19.1	54,207,529	58,139,583	38,789,747	40,679,423	15,417,782	17,460,160	-11.7		
D&H	11,328,669	13,197,775	-14.2	23,332,192	26,119,962	8,189,358	8,835,115	15,142,834	17,284,847	-12.4		
DL&W	4,235,800	3,716,789	+13.9	20,679,728	23,782,637	16,001,019	18,038,056	4,678,709	5,744,581	-18.6		
D&RGW	25,674,404	21,623,226	+18.7	41,724,592	36,967,180	20,271,791	19,316,273	21,452,801	17,650,907	+21.5		
DM&IR	10,803,455	7,681,339	+40.6	19,677,912	16,407,234	17,991,687	12,110,702	1,686,225	4,296,532	-60.8		
EJ&E	15,628,630	16,217,694	- 3.7	20,360,649	21,145,347	17,017,922	17,500,619	3,342,727	3,644,728	- 8.3		
Erie	16,434,197	23,627,885	-30.5	42,222,435	49,704,773	29,763,202	33,154,269	12,459,233	16,550,504	-24.7		
GTW	2,746,940	2,595,482	+ 5.8	11,832,940	11,043,315	8,158,121	8,445,896	3,674,819	2,597,419	+41.4		
GN	55,865,145	65,105,465	-14.2	110,327,055	111,459,466	48,168,385	47,618,707	62,158,670	63,840,759	- 2.7		
GM&O	17,601,977	19,735,544	-10.8	38,239,300	41,422,825	20,674,771	23,987,780	17,564,529	17,435,045	+ .7		
IC	49,582,872	61,696,726	-19.7	96,046,508	105,332,381	55,616,354	57,235,292	40,430,154	48,097,089	-15.9		
LV	8,310,840	10,395,895	-20.1	18,591,428	20,795,899	9,725,294	10,716,381	8,866,134	10,079,518	-12.1		
U.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	7,574,311	7,947,977	- 4.7	13,857,162	15,023,521	11,776,968	11,770,440	2,080,194	3,253,081	-36.0		
L&N (incl. N. C. & St. L.)	44,020,570	58,448,738	-24.7	97.012.782	108.408.767	38,276,568	40,391,428	58,736,214	68.017.339	-13.7		
MSIPASSM	8,360,318	9,250,316	- 9.6	21,505,064	21,986,976	14,744,764	14,631,105	6,760,300	7.355.871	- 8.1		
M-K-T	7,228,174	8,611,085	-16.1	18,960,350	23,179,132	10,850,506	13,843,325	8,109,844	9,335,807	-13.2		
MP	45,436,934	48,105,324	- 5.6	84,624,192	88,680,900	55,515,106	58,121,457	29,109,086	30,559,443	- 4.8		
NYC	74,389,733	80,399,639	- 7.5	173,047,900	202,489,349	124,760,880	136,308,667	48,287,020	66,180,682	-27.1		
NYC&StL	32,544,860	29,612,046	+ 9.9	56,971,345	54,546,748	31.728.674	32,975,875	25,242,671	21,570,873	+17.0		
NYNH&H	9,391,957	9,952,590	- 5.7	31,209,104	34,233,982	34,217,049	33,928,397	- 3,007,945	305,585	+		
N&W	35,780,364	38,394,341	- 7.8	83,902,370	81,686,657	44,445,870	45,129,551	39,456,500	36,557,106	+ 7.9		
NP	47,686,840	46,199,936	+ 3.2	95,793,504	90,973,067	42,499,983	42,145,638	53,293,521	48,827,429	+ 9.1		
PRR	99,129,883	120,529,418	-17.8	230,137,133	255,727,304	144,742,955	146,769,077	85,394,178	108,958,227	-21.6		
Pale	16,041,290	23,329,690	-31.2	24,914,035	30,615,562	12,527,654	12,483,083	12,386,381	18,132,479	-31.7		
		20,305,514	-19.4			23.006.670				-31.4		
Reading	16,358,100	21,867,557	-37.8	33,967,798 34,078,862	41,640,544	24,059,510	25,675,664	10,961,128	15,964,880 16,583,657	-39.6		
STL-SF		31,050,902			42,380,286		25,796,629	10,019,359		+15.5		
SLSW	34,469,426		+11.0	43,006,022	39,121,181	14,314,738	14,292,518	28,691,284	24,828,663	-93.2		
SAL	24,497,492	32,814,960	-25.4	46,920,957	55,607,245	24,323,461	26,207,044	22,597,496	29,400,201	-21.9		
Southern	46,040,812	56,725,432	-18.8	74,821,368	89,491,997	57,476,511	67,270,192	17,344,857	22,221,805			
SP System	115.890.325	94.885.130	+22.1	207.705.214	190.678.118	112.381.521	119,674,376	95.323.693	71.003.742	+34 2		

	Cash & Temporary Cash Investments Sept. 30				Total Current Assets		Total Current Liabilities		Excess of Current Assets over Liabilities	
	1957	1956	Inc. or Dec. %	End of Sept. 1957	End of Sept. 1956*	End of Sept. 1957	End of Sept. 1956	End of Sept. 1957	End of Sept. 1956*	Dec.
T&P	\$12,343,469	\$16,944,569	-94.0	\$26,755,645	\$30,021,580	\$10,431,163	\$11,480,440	\$16,324,482	\$18,541,140	-12.0
UP Wabash	122,912,733 16,825,515	118,727,775 23,827,077	+ 3.5 -29.4	209,162,910 30,361,518	209,874,166 36,345,546	127,168,044 18,828,671	109,878,663 18,915,217	81,994,866 11,532,847	99,995,503 17,430,329	-18.0 -33.9

Certain capital and other reserve funds are not included in this tabulation.

\*Restated, due to a change in classification.
†Current liabilities exceeded current assets in 1957.

# REPRESENTATIVE EQUIPMENT ISSUES

			l-A	Issue Sold at		
Road	Maturity	Amount	Int. Rate %	Price	Cost	Purchaser
Alabama Great Southern, Ser. K	1957-1967	\$2,400,000	43%	99.19	4.57	Halsey, Stuart & Co., et al
Ann Arbor, Ser. C	1958-1972	1,830,000	35/8	98.0893	3.98	Halsey, Stuart & Co., et al
Baltimore & Ohio, Ser. II	1958-1972	3,360,000	4	99.16	4.18	Halsey, Stuart & Co., et al
Ser. II	1958-1972	3,585,000	436	99.525	4.63	Salomon Bros. & Hutzler, et al
Ser II	1958-1972	3,435,000	41/4	99.3686	4.40	Halsey, Stuart & Co., et al
Boston & Maine, Ser. I. Central of Georgia, Ser. D.	1957-1971	7,080,000	6	99.09	6.26	Halsey, Stuart & Co., et al
Central of Georgia, Ser. D	1957-1972	2,550,000	5	99.139	5.16	Halsey, Stuart & Co., et al
Chesapeake & Ohio	1958-1972	8,100,000	3 1/8	99.5487	3.99	Salomon Bros. & Hutzler, et al
	1958-1972	9,000,000	434	99.44	4.39	Salomon Bros. & Hutzler, et al
	1958-1972	4,200,000	43/8	99.51	4.44	Halsey, Stuart & Co., et al
	1958-1972	4,500,000	43/8	99.2299	4.55	Halsey, Stuart & Co., et al
Chicago & Eastern Illinois, Ser. K	1957-1972	1,980,000	43/8	99.272	4.50	Salomon Bros. & Hutzler, et al
Ser. L	1958-1972	2,130,000	5	99.138	5.22	Salomon Bros. & Hutzler, et al
Chicago & North Western	1958-1972	1,335,000	5 1/2	99.2813	5.59	Halsey, Stuart & Co., et al
	1958-1972	2,250,000	6	99.26	6.23	Halsey, Stuart & Co., et al
Chicago, Burlington & Quincy	1957-1972	7,500,000	3 3/4	99.278	3.90	Salomon Bros. & Hutzler, et al
Chicago, Milwaukee, St. Paul & Pacific, Ser. VV	1957-1972	3,000,000	4	98.26	4.30	Halsey, Stuart & Co., et al
Ser. VV	1957-1972	6,000,000	43/8	98.40	4.66	Halsey, Stuart & Co., et al
Chicago, Rock Island & Pacific, Ser. R	1957-1972	3,000,000	41/8	99.7277	4.17	Salomon Bros. & Hutzler
Cincinnati, New Orleans & Texas Pacific, Ser. L	1957-1967	8,400,000	376	99.537	3.98	Salomon Bros. & Hutzler, et al
Ser. L	1957-1967	4,200,000	3 %	99.0775	3.97	Salomon Bros. & Hutzler, et al
Denver & Rio Grande Western, Ser. V	1957-1972	4,800,000	3 3/4	99.6433	3.81	Halsey, Stuart & Co., et al
Erim	1958-1972	2,925,000	4 2/4	99.138	4.96	Halsey, Stuart & Co., et al
Great Northern	1957-1972	4,140,000	3 3/4	99.381	3.85	Salomon Bros. & Hutzler, et al
Gulf, Mobile & Northern, Ser. H	1958-1972	3,030,000	414	98.63	4.49	Salomon Bros. & Hutzler, et al
Illinois Central, Ser. 44	1957-1972	9,600,000	41/8	99.315	4.24	Salomon Bros. & Hutzler, et al
Ser. 45	1958-1973	10,500,000	414	98,3293 99,081	4.54 4.71	Salomon Bros. & Hutzler, et al
Minneapolis & St. Louis, Ser. A	1958-1972		436 436 436		4.71	Halsey, Stuart & Co., et al Halsey, Stuart & Co., et al
Missouri Pacific, Ser. G.	1958-1972 1958-1972	4,875,000	4.73	99,371 99,4827	4.64	Halsey, Stuart & Co., et al
Ser. H	1958-1972	3,525,000	434	98.025	4.89	Salomon Bros. & Hutzler, et al
Ser. I	1957-1971	1,050,000	454	99.15	4.44	Halsey, Stuart & Co., et al
Monon	1958-1972	3,825,000	43%	98.582	4.44	Salomon Bros. & Hutzler, et al
New York Central	1958-1972	3,555,000	5	98.061	5.41	Halsey, Stuart & Co., et al
Norfolk & Western, Ser. A.	1957-1972	4,650,000	35/8	98.3037	3.91	Halsey, Stuart & Co., et al
Ser. A	1957-1972	6,600,000	334	98.22	3.79	Salomon Bros. & Hutzler, et al
Ser. B	1957-1972	4,320,000	41/8	98.5779	4.37	Halsey, Stuart & Co., et al
Ser. B	1957-1972	4,320,000	414	98.287	4.42	Salomon Bros. & Hutzler, et al
Ser. B.	1957-1972	4,260,000	414	98.5983	4.49	Salomon Bros. & Hutzler, et al
Ser. C	1958-1972	4,110,000	43/8	98.621	4.62	Salomon Bros. & Hutzler, at al
Ser. C	1958-1972	4,140,000	3 1/8	98.478	4.13	Salomon Bros. & Hutzler, et al
Northern Pacific	1958-1972	6,420,000	412	99.475	4.64	Salomon Bros. & Hutzler, et al
Pennsylvania, Ser. II	1957-1972	5,490,000	41/4	98.578	4.50	Salomon Bros. & Hutzler, et al
Pittsburgh & Lake Erie	1958-1972	6,720,000	384	98.6243	4.01	Salomon Bros. & Hutzler, et al
	1958-1972	2,250,000	35%	98,4793	3.90	Halsey, Stuart & Co., et al
	1958-1972	2,220,000	41/4	98.539	4.54	Halsey, Stuart & Co., et al
	1958-1972	4,950,000	41/4	98.07	4.63	Salomon Bros. & Hutzler, et al
Reading, Ser. Z	1958-1972	2,465,000	414	98.0155	4.61	Halsey, Stuart & Co., et al
Reading, Ser. Z	1957-1971	4,650,000	4	98.6353	4.27	Halsey, Stuart & Co., et al
Southern, Ser. UU	1957-1967	11,080,000	41/8	99.4785	4.25	Salomon Bros. & Hutzler, et al
Ser. UU	1957-1967	5,540,000	334	99.4355	3.88	Halsey, Stuart & Co., et al
Southern Pacific, Ser. WW	1958-1972	9,600,000	414	98.651	4.46	Halsey, Stuart & Co., et al
Ser. XX	1958-1972	6,000,000	41/2	98.36	4.83	Halsey, Stuart & Co., et al
Ser. YY	1958-1972	7,500,000	43%	98.479	4.81	Salomon Bros. & Hutzler, et al
Ser. ZZ	1958-1972	6,000,000	43%	98,472	4.82	Halsey, Stuart & Co., et al
Spokane, Portland & Seattle	1957-1972	3,690,000	334	99.5513	3.89	Salomon Bros. & Hutzler, et al
Virginian, Ser. F	1958-1972	1,200,000	3 3/4	99.771	3.82	Baxter & Co., et al
Wabash, Ser. H	1958-1972	3,780,000	4	98.152	4.35	Halsey, Stuart & Co., et al
Ser. H	1958-1972	6,615,000	43/2	98.456	4.82	Salomon Bros. & Hutzler, et al
Ser. I	1958-1972	2,745,000	41/4	98.4543	4.56	Salomon Bros. & Hutzler, et al
Western Maryland, Ser. U	1958-1972	4,185,000	33/4	99.26	3.91	Halsey, Stuart & Co., et al
Wisconsin Central, Ser. E.	1958-1972	2,400,000	4 7/8	99.307	5.06	Salomon Bros. & Hutzler, et al

# NEW SECURITIES ISSUES 1937-1957

	(Amou	ints in thousand	ds of dollars)		
Year	Bonds	Stock	Railroad total	Total all Industries	Railroad as per cent of total
1937	344,257		344.257	2,309,524	14.9
1938	54,873		54,873	2,154,664	2.5
1939	185,474	233	185,707	2,164,007	8.6
1940	323,912		323,912	2,677,173	12.1
1941	366,313		366,313	2,666,887	13.7
1942	47,726		47,726	1,062,288	4.5
1943	161,179		161,179	1,169,692	13.8
1944	609,010	350	609,360	3,201,891	19.0
1945	1,453,517	504	1,454,021	6,010,985	24.2
1946	711,119		711,119	6,899,646	10.3
1947	285,680		285,680	6,576,824	4.3
1948	623,348		623,348	7,077,820	8.8
1949	459,982		459,982	6,051,550	7.6
1950	554,100		554,100	6,361,043	8.7
1951	330,021	5,066	335,087	7,741,099	4.3
1952	524,205	1,000	524,205	9,534,162	5.5
1953	302,397		302,397	8,897,996	3.4
1954	478,895	427	479,322	9,516,168	5.0
1955	541,854	5,923	547,777	10,240,155	5.3
1956	380,811	1,201	382,012	10,938,718	3.5
1957#	300.511		300,511	10,928,486	2.7

\*10 months total.
Compiled by Securities and Exchange Commission.

# D 1955-1957 SIGNAL

D CONSTRUCTION			
	1957	1956	1955
Automatic block signals	423	864	754
Interlocking construction Signals and switches At new plants and added in plants rebuilt. At automatic plants	1,417 171	1,303 269	1,433 147
Spring switches Spring buffer mechanisms Mechanical facing-point locks. Signals at spring switches	127 59 208	147 41 268	107 35 183
Centralized traffic control Power switch machines. Lever-controlled signals	586 1,454 1,030	819 1,948 1,453	305 885 483
Classification yards Car retarders. Power switch machines	61 383	69 254	54 947
Highway crossing protection  Number of crossings at which new installations were made in year	1,630	1,320	1,146
Totals	7,549	8,755	5,779



Detector Car 102 located its first defective rail in 1928. During the 30 years since, Detector Cars of Sperry Rail Service have discovered millions of rail defects; helped America's railroads to set safety records unequaled by any other form of transportation.

The modern, highly efficient Sperry Detector Car of today is a far cry from old 102.

In line with our program of constant research, Sperry Engineering is working on a new rail-testing concept. The year 1958 will bring even greater advances in rail testing.



Division of Sperry Products, Inc. Danbury, Connecticut

# E CENTRALIZED TRAFFIC CONTROL

- IKAPPIC CON	ITKOL	1			
Railroads and Locations	Miles	Power Switches	Lever Controlled Signals	Auto- matic Signals	Mfg
Jesup, GaWaycross	38.5s 45.9s	9	25 27	19 19	Union Union
Olathe, Kan -Gardner	8.0d	11	21	6	Union
Ottawa, KanW. Ottawa Ottawa, KanWiggam	4.2s 47.0d	3 16	23	61	Union
Mitchel, IndWashington		11	33	26	GRS
Maine Jct., MeS. Orange		2	14	2	GRS
CN Winnipeg, Man	. 4.1s 12.0d	30	34	19	GRS
GTW Imlay City, MichLapeer	0.8t	4	12	10	Union
CP Glen Tay, OntWilkinson	37.5s	10	28	18	GRS
Bremo, Va -Shores	4.0d	7	15		Union
McDougal, W. VaCabin Creek Plymouth, MichGrand Blanc	28.1d 40.9s	44	67 38	29 18	Union GRS
Pelton, OntBlenheim	68.0s	14	54	31	GRS
Sioux City, IaFerry, Neb	1.5s	2	10	2	GRS
Hannibal, MoMark	14.2s 62.9s	6	16 56	8 42	Union Union
Comus, MinnAlbert Lee CMStP&P	54.0s	7	30	24	Union
Bouton, laIndian Creek	78.0s	18	55	04	Union
Summit, N. DTwin Brooks	50.0d 17.0s	3	9	6	Union
Afton, N. YGrover State Line, PaStarruca	2.1d 7.4s	4	12	4 4	GRS GRS
DT&I Flat Rock, MichCarleton	2.3d 4.8s	.,	4	2	Union
DM&IR Lorgo, MinnWolf	3.0s 7.6s	3 12	1.4 41	2	Union Union
ERIE Bergen, N. JJersey City	1.8d 2.4s	7	9	4	GRS
GN Lyndale, MinnMW Jct	1.6s	- 1	5	2	GRS
Wahpeton Jct., Minn Breckenridge Endot, B. CBrownsville	1.2d 5.8s	3	14	8	GRS
White Haven, PaMt. Park	16.0s 7.0d	6	17	15	GRS
Bowling Green, KyMontford, Tenn.	59.3s 2.6d	19	60	28	GRS
MP Leeds, Mo	***	2	4		GRS
	76.0s	12	30	30	GRS
Rochester, N. YSanborn Nasby, OElkhart, Ind Elkhart "B" - West Tower Pana, III Lenox	133.0d 5.0d 69.5s	53 25 13	100 21 36	142 4 25	GRS GRS
N&W Petersburg, VaFleet St	***	1	3		Union
Petersburg, VaFleet St. Petersburg, VaPoe Montvale, VaEast End. Roanoke, Va"WB"	0.3s 2.2d	4	4	4	Union Union
	3.8s 0.6d	22	22		Union
"WB"-Elliston, Va	5.6s 8.8d	8	12	15	Union
Elliston, VaArthur Bluefield, W. VaMullins Bluefield-Sam Siding	5.6d	6		6	Union Union
Bluefield-Sam Siding	5.25	3	12	4	Union
Caretta Fork, W. VaCedar Bluff	24.5s	6	26	12	Union
Livingston, MontHelena	123.0s	25	74	76	GRS
PRR Glen Loch, PaDownington	6.8s	**	2	2	Union
Glen Loch, PaDownington Columbia, PaMiddletown Sunbury, PaHalifax. Conpitt Jct., PaDerry	11.5s 38.7s 17.2s	7	1 21 2	18	Union Union Union
Additions	***	5	15	.5	GRS
Port Clinton, Pa Schuylkill Haven	7.5s	3	7	4	GRS
Reading, PaBelt Line Jct	1.5d 5.5s	13	12	6	GRS Union
Gary, FlaSulphur Springs		12	26	4	GRS
Alexandria, Va	8.0d 5.7s	3	12	2	GRS
Army Depot, Ga.	* * *		2.0	4.7	
Ft. Worth, TexJuddUP	62.8s	16	48	21	GRS
McCammon, IdaMontpelier WAB	156.0s 20.0d	32	117	-	Union
Brisbane, IIIPalos Park Ashburn, IIIChicago	15.4s 2.2s	2	4		Union Union
Montpeller, OAdridn, Mich.	34.0s 2.4d	6	25	21	Union
Single track(s)	353.3 0.8	586	1,454	030, 1	
Track miles	2,039.2				

# F AUTOMATIC BLOCK SIGNALING

Railroad	Miles	Signals	Mfgr
A&S			
MP11-13	2.0d	10	Union
BaM			
Salem, Mass	0.3d	1	Union
Castle Hill, Mass	0.8d	1	GRS
Salem, Mass.	0.7d	2	GR5
CP			
Delamere, Ont.—Romford	26.0s	36	Union
Red Deer, Alta-Wetaskiwin	56.8s	72	GRS
Ft. William, Ont	2.0d	3	GRS
CN			
Cornwall, OntCardinal	40.0d	50	GRS
Hamilton, OntBayview	1.0s	6	GRS
	3.0d		
Joffre, QueWash	5.0s	5	Union
C&NW			
Limestone, IIIKickapoo	1.5s	6	GRS
CNS&M			
Rockland Road, III.	0.5\$	1	Union
DL&W			
E. Buffalo, N.YCheektowaga	2.4d	4	Union
Lancaster, N.YDellwood	3.9d	4	Union
KCS			
Pittsburg, KanGulfton, Mo	17.4s	19	GRS
MTA			
Boston, Mass	1.6d	15	Union
NYTA			
Gun Hill Road-149th St	3.7d	60	Union
NaW			
Norfolk, VaLovitt Ave	0.25	5	Union
Jacobs Fork Jet., Va	0.5s	2	Union
Jacobs Fork Jet., Va	0.5s	2	Union
Stric, VaThomas	1.2s	3	Union
NP			
Northtown, MinnBig Lake	35.0d	36	GRS
Childs, MontHe on	18.0s	23	GRS
ON			
Temagami, OntNorth Bay	42.0s	55	GRS
SPAS			
Wishram, Wash	0.18	2	GRS

# G 1957 RETARDER

Railroads and Locations	Number of Retarders	Rail Feet of Retarders	Number Power Switches	Number Class Tracks	Mfgr
ATASF					
Corwith, III	5	513	34	32	Union
CAO					
Russell, Ky	5	962	33	32	Union
CBAQ	-			42	Union
Cicero, III	7	610	44	43	Union
CRI&P Silvis, III					†Federal
LAN					
Atlanta, Ga	4	749	23	24	Union
NYC					
Elkhart, Ind	10	2,184	75	72	GRS
Pennsylvania					
Conway, Pa., WB	14	2,522	55	53	Union
St. L-SF					
Memphis, Tenn	6	1,374	50	50	GRS
Southern					
Atlanta, Ga	11	1,155	66	65	*GRS *Reeves
	_				
Totals	61	10,029	380		

†Automatic switching controls, made by Federal & Telephone Radio Div. IT&T, added in existing retarder yard.
\*Switch machines, and retarders furnished by General Railway Signal Co., and the automatic control aquipment by Reeves Instrument Corporation.

## INTERLOCKINGS INSTALLED

Railroads	Home Signals	Power Switches	Mfgr.
AT&SF			
E. Galesburg, III.	. 4	4	Union
ACL			
Burroughs, Ga	. 7	4	Union
Alafia Bridge, Fla	. 2		Union
B&M			
Castle Hill, Mass	. 9	9	GRS
Greenfield, Mass.			GRS
Boston, Mass.		9	Union
		3	Union
Worcester, Mass.	. 0	3	Omon
CN		**	GRS
Hamilton, Ont.		11	
Joffre-Walsh, Que	. 11	10	Union
St. Boniface, Man	. 8	10	GRS
CV			
St. Albans, Vt	15	12	GRS
CP			
Calgary, Alta	70	59	GRS
C&O	70	37	010
	8	4	Union
Cabin Creek, W. Va		4	Onion
CMStP&P		-	
Dunn, Minn	. 4	2	Union
DL&W			
Tobyhanna, Pa	. 5	3	Union
Cheektowaga, N. Y	3	1	Union
IC	-		
Belleville, III.	7	2	
		3	
Wilderman, III.		A	****
Chicago, Ash St	3	0	
	(Continued	00 0000	104)

(Continued on page 104)

# behind the 8-ball





We will be glad to send you enlarged copies of this Hungerford cartoon (without advertising copy) for posting on your office and shop bulletin boards, or a cut for your company magazine, at cost.

by Hunsentono



# **Edgewater Steel Company**

P.O. Box 478 . Pittsburgh 30, Pa.

makers of Rolled Steel Wheels for: Freight Cars - Passenger Cars - Diesel Locomotives

### H-INTERLOCKINGS INSTALLED

(Continued from page 101)

Railroads	Signals Home	Switches Power	Mfgr.
KCT			
Kansas City, Mo., Tower 2	82	78	Union
MP			
Leavenworth, Kan	3	1	GRS
NY Transit			
Culver Rd., New York	60	30	GRS
NYC			
Buffalo, N. Y., "HA" Buffalo, N. Y., "UR" Buffalo, N. Y., "RB" Buffalo, N. Y., "BC"	6	8	GRS
Buffalo, N. Y., "UR"	9	7	GRS
Buffalo, N. Y., "RB"	8	5	GRS
Buffalo, N. Y., "BC"	21	2	GRS
NH	-		
North Haven, Ct	9	4	Union
N&W			
Weller, Va.	10	9	Union
NP			
Hoguiam, Wash.	3	5	GRS
PRE	-	-	
Chestnut Hill, Pa	5	4	Union
Billmeyer, Pa.	3	1	Union
Middletown, Pa.	7	8	Union
SPAS	,		•
Celilo Bridge, Wash.	3	4	GRS
SOUTHERN	9	-	
Hayne, S. C.	2	5	GRS
	2	2	GRS
Monroe, Va	2	2	GRO
	7		Union
Winnemucca, Nev.	3		Union
Salem, Ore.	3	i	Union
Willsburg Jct., Ore			
Houston, Tex., "207"	14	6	Union
Houston, Tex., "Br. 5A"	4	2	Union
TRAStL			
St. Louis, Mo	30	22	Union
WABASH			
Detroit, Mich.	3	1	Union
	-		
Totals	490	358	

# YARD RADIO

Railroad	No. of Yards with Radio	No. of Locomotives Equipped	No. of Fixed Stations	No. of Walkie- Talkie Sets
AT&SF	12	13	9	19
ACL	3		3	
8&0	1	3	1	
B&M	2	2	1	6
Bekm	-	1*		
CN	3	29	4	8
CP	2	7	2	1
C&O	2	24	8	9
C&EI	Ã.	24		
CB&Q	1		1	
CMSTP&P	3	5	2	
CSS&SD	1		1	
D&H	3	13	3	7
D&RGW	4	10	4	
DM&IR	2		1	9
ERIE	5	5*		
GN	7	19	1	14
IC	1	4	1	
	4.4	1*		
KCS	1	6	2	**
L&A	1	8	1	
K&IT	1			3
L&N	1	14	3	6
MKT	13		12	15
MP	1	14*	1	
NYC	14	48	22	83
P&LE	3	22	5	32
	0.9	1*		* *
N&W	3	51	6	2
NP	10	26	3	* *
PRR	4	16	12	.51
RDG	1	4	1	4
	* *	2*	2.2	* *
RF&P	7	4	1	11
STL-SF	/	1	2	11
	**		* *	
SP	3 7	11	2	
T&NO	4		2	3
UNION	2	32	1	3
WM	2	4	1	4
Totals	133	448	120	288

# GRADE CROSSING PROTECTION

	Flashing	Number Gates	of Crossings Sou	irces of Fun-	ds
Railroads	Light Signals	and Flashers	Railroad	Public Funds	Joint
AT&SF	64	24	20	18	50
ACL	30	9	15	3	23
B&O	15	10	18	**	7
B&A	14	* *	2		12
B&M	9	6	7	6	2
CN	105	15	4	17	84
CP	84	22	**	7	99

	Flashing Light	Gates		Public	
Railroads	Signals	Flashers	Railroad	Funds	Joint
CG	13		5	* *	8
C&O	16	6	2	1	20
C&NW	71	58	68		61
CB&Q	23	8	2		29
CMSP&P	28	15	4	2	37
CRI&P	24	5	9	1	19
CTA		12	2	10	
D&H	3	14	12		5
DL&W	6	4	6		4
DT&I	7	1	6	2	
ERIE	8	10	14	1	3
FEC	5	15	15	5	
GN	22	21	13	2	2
GM&O	7	8	1	1	13
IC	27	4	2	6	23
JC	3	7	10		
KCS	10	1	3	2	6
LV	9	4	2	Ā	7
II	2	11	5		8
L&N	10	5	5	2	8
MP	45	5	27	20	3
NYC	34	22	18	16	22
NYC&SIL	16	1	6	. 1	10
NH	11	12	19	3	1
N&W	12	10	9	7	6
NP	24	9	17	5	11
PE	17	í	3	10	5
PRR	25	17	20	5	17
READING	8	10	18		**
StL-SF	30	6	13	2	21
SOUTHERN	19	7	8	Ā	14
SAL	28	4	10	8	16
SOO	22	1	2		21
SP	97	17	25	21	68
T&NO	26	1	10	2	15
T&P	9	2	4	î	6
UP	20	6	10	1	15
WAB	11	7	9	8	1
Totals	1,175	455	510	219	867

# K YARD COMMUNICATIONS

	Loudspeaker Systems			Intercommunications Systems			
Kailroad	No. of Points Equipped	No. of Two-way Speakers	No. of Paging Speakers	No. of Systems Installed	No. of Tele- phones	No. of Loud- speakers	
AT&SF				3		175	
B&O	1	23	20				
BAR	1		1	* *	* *	* *	
88.M	i i	4	56	1	* *	12	
***	2	45	3	3	70		
	2		3		72	20	
	2	10	* *	1	* *	3	
C&O	4	108	2	6		84	
C&EI	1	13	**	* *	* *		
CB&Q	1	123	* *	1		5	
CMSTP&P	1	6		7	7	62	
DL&W	1		6	1		10	
DT&1	1	45					
DM&IR			* *	2	**	13	
0.00		20	* *	_		-	
		20	2.5	* *	4.5	11	
	1		41	2	* *	12	
IC	2	9	2	2	4.4	25	
JCL	1	8	1	1		10	
LS&I	1	6	3	* *		* *	
L&N	1	60	18	2	165		
MEC				1		23	
M&STL				1		15	
MP			* *	1		40	
NYC	7	420	75	2	8	4	
	,		-	2	14	*	
	1		00	2	14		
	1	2	22	* *	* 4	* 2	
NYNH&H	**	4.4	5.5	1	3	5	
N&W	3	* *	20	1	* *	4	
NP	1	3	6	1		20	
PRR	3	60	37	4	54	40	
QNS&L	1	10	* *	1	10	5	
#DG	1	15	16				
STL-SF	i	88	24	1	38	6	
STLSW	1	21	4	2		15	
	3	356	100		* *		
	1		100	12	* *	107	
		42		2.4		* *	
T&NO	2	4	4.4				
UNION	2	7	6	7	20	16	
UP	3	93		4	16	23	
WAB	1	71	44	2		41	
WP	1		4				
Totals	58	1.672	511	75	407	795	

# L COMMUNICATIONS

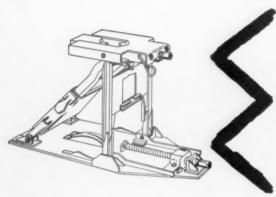
United States and Canada	1957	1956
Miles of new or rebuilt pole line	6,139 11,094 6,642‡‡ 319	7,304 11,838° 8,958° 4,305
(1) Long—Distance voice circuits Carrier Channel Terminals Voice Carrier Repeaters (2) Printing—Telegraph circuits	899 168	714 152

Control   Cont													
	nited States and Can	ada		1957	1956					Caboose	S,		Wa
Combines and other care (order, m/w eight)   534   491   Climitated   2   2   3   1   1   1   1   1   1   1   1   1						Railro	ood						To S
Fixed wayside stations   1.00   1.0	Locomotives	nications		975		CRIA	P						
				554	491	Clinch	nfield		2				
						DL&W	/					3	
Vallet folish sets   19   198   19	Locomotives (autos	trucks)		448	416	D&RG	W		18	10		2	
				120	101	DM&I	R		9			19	
Description of the property appeters   1,672   938   CAF   11   12   10   10   10   10   10   10	Yard Loudspeaker	Systems		288	168	DSS&	A						
	two-way speakers					G&F			11				
	// imercommunication	Systems				GB&V	V					1	
m of 1 through is supmend on the composition of the						GM&0	0					2	
### A012 miles aluminum ### A012 miles aluminum ### A013 miles aluminum ### A028 miles aluminum ### A0						JCF			12				
ABO   TRAIN			* * * * * * * * * * * *	8,443	0,/81	KCS K&IT							
ROAD TRAIN	4,086 miles aluminum	1				L&N							
ROAD TRAIN	3,133 miles aluminur	n				M&ST	L		* *	4.4		2	
ROAD TRAIN						MKT			14				
COMMUNICATIONS    Communications   Calcounts   Calcoun						MON	ON					1	
Communications	A ROAD TE	RAIN				NP .				30			
STLSF   10	COMMUN	VICATIONS				PRR							
			•			STL-SI	F		10				
						SAL				3211		i	
		Locomotives		Fixed		SIERR	A		4	5		5	
Second   S		Equipped	Cars		Sets					9		9	
Section   10	&SF								10			2	
Table   10   10   10   10   10   10   10   1	R	4.4			20	SI						1	
Totals   State   Sta					14					5*			
Totals	WC			19		WP				3*	_	1	
Section   Sect	EI		9	10	9				875	554	13	36	
### STPRP 17 20 5 15 **Auto or mech dept. eqpt.  #### COULPMENT ORDERS Reported in 1957  #### Country of the co	88Q	* *	722			+Ind							
Could be described   Could b	man.	30	3	12	i i	t t Place	k. & antenna	s only					
Box   Flat   Gondola   Hopper   Hopper   Tank   erator   Caboose   Other   10,060   721   11,369   10,255   4,290   2,792   2,042   112   195   4   4,288   1,214   4,706   18,717     6,349   2,320   265   2,135   3	GWMSTP&P	5			1	‡‡Rac	ks & antenna						
Box   Flat   Gondola   Hopper   Hopper   Tank   erator   Caboose   Other   10,060   721   11,369   10,255   4,290   2,792   2,042   112   195   4	MSTP&P	.5 17	20	.5	1 15	‡‡Rac *Aut **M/	cks & antenna to W or mech d	ept. eqpt.	195	57			
10,060   721   11,369   10,255   4,290   2,792   2,042   112   195   4   4,288   1,214   4,706   18,717     6,349   2,320   265   2,135   3	QUIP/	,, MENT	ORI	DERS	Re	‡‡Rac *Aut **M/	cks & antenna to W or mech d	in	195				
Refrig-   Refr	QUIP/	,, MENT	ORI	DERS	Re	***M/	ets & antenno	in		Refrig-	Caboose	Other	7.
Box   Flat   Gondola   Hopper   Hopper   Tank   erator   Caboose   Other   1	QUIP/	MENT	ORI	DERS	Reby Type	*Automatical states and the states and the states are states and the states are states and the states are stat	ted  Hopper 10,255	in  Cov.	Tank 2,792	Refrig- erator 2,042	112	195	4
Box   Flat   Gondola   Hopper   Hopper   Tank   erator   Caboose   Other   1	QUIP/	MENT	ORI	DERS	Reby Type	**Rac **AM/ **M/ **M/	ted  Hopper 10,255	Cov.	Tank 2,792	Refrig- erator 2,042	112	195	4
30,530 1,058 10,053 31,070 8,577 6,295** 4,928 88 2,659 9 56 30,077 2,857 4,840 19,069 6,131 2,420 200 1,486 6 Eleven month company shop figures. Source: American Railway Car Institute Travelve month company shop figure.  Coach Coach Comb. Sleeping Dining Club Express MU Other  35 2 2 6 1 25 6 1 37 0 0 1 0 102 0 78  Coach Co	EQUIP/ reight-Train C	MENT	ORI	DERS stic Use 10,060 4,288	1   15   Re	**Rac **AM/ **M/ **M/	ted  Hopper 10,255	cov. Hopper 4,290	Tank 2,792	Refrig- erator 2,042 2,320	112	195	4
30,077 2,857 4,840 19,069   6,131 2,420 200 1,486 6	EQUIP/ reight-Train C	MENT	ORI	DERS  stic Use—  10,060 4,288  estic Use—	by Type  Flat 721 1,214  -by Type	##Roc **Aut**********************************	Hopper 10,255 18,717	in  Cov. Hopper 4,290	Tank 2,792 6,349	Refrig- erator 2,042 2,320 Refrig-	112 265	195 2,135	3
Twelve month company shop figure.  assenger-Train Cars Ordered for Domestic Use—by Type  Coach Comb. Sleeping Dining Club Express MU Other 35 2 2 6 1 25 6 1 37 0 0 1 0 102 0 78  assenger-Train Cars Delivered for Domestic Use—by Type  Self. Coach Propelled Sleeping Dining Postal Express Milk Other 44 12 1 6 41 77 521 3	COUIP/	MENT ars Ordered ars Delivered	ORI	DERS  stic Use  10,060 4,288  estic Use  Box	by Type  Flat 721 1,214  -by Type	Sondola 11,369 4,706	Hopper 10,255	Cov. Hopper 4,290	Tank 2,792 6,349	Refrig- erator 2,042 2,320 Refrig- erator	112 265 Caboose	195 2,135 Other	3
Twelve month company shop figure.  assenger-Train Cars Ordered for Domestic Use—by Type  Coach Comb. Sleeping Dining Club Express MU Other 35 2 2 6 1 25 6 1 37 0 0 1 0 102 0 78  assenger-Train Cars Delivered for Domestic Use—by Type  Self. Coach Propelled Sleeping Dining Postal Express Milk Other 44 12 1 6 41 77 521 3	CQUIP/ reight-Train C	MENT ars Ordered ars Delivered	ORI	DERS  stic Use  10,060 4,288 estic Use  30,530	Reby Type    Flat   1,058	# Rac ** Auto	Hopper 10, 255 18,717	Cov. Hopper 4,290	Tank 2,792 6,349 Tank 6,295**	Refrig- erator 2,042 2,320 Refrig- erator 4,928	112 265 Caboose 88	195 2,135 Other 2,659	4 3 7 9
Coach   Comb.   Sleeping   Dining   Club   Express   MU   Other	CQUIP/ reight-Train C	MENT ars Ordered ars Delivered	ORI	DERS  stic Use—  10,060 4,288 estic Use—  80x 30,530 30,077	1   15     Re	# Rac ** Auto	Hopper 10, 255 18,717	Cov. Hopper 4,290	Tank 2,792 6,349 Tank 6,295**	Refrig- erator 2,042 2,320 Refrig- erator 4,928	112 265 Caboose 88	195 2,135 Other 2,659	3 7 9
Coach   Comb.   Sleeping   Dining   Club   Express   MU   Other	COUIP/ reight-Train Courseight-Train Cou	MENT  ars Ordered  ars Delivered	ORI for Domes	DERS  stic Use—  10,060 4,288 estic Use—  80x 30,530 30,077	1   15     Re	# Rac ** Auto	Hopper 10, 255 18,717	Cov. Hopper 4,290	Tank 2,792 6,349 Tank 6,295**	Refrig- erator 2,042 2,320 Refrig- erator 4,928	112 265 Caboose 88	195 2,135 Other 2,659	4 3 7 9
Coach   Comb.   Sleeping   Dining   Club   Express   MU   Other	COUIP/ reight-Train Courseight-Train Cou	MENT  ars Ordered  ars Delivered	ORI for Domes	DERS  stic Use—  10,060 4,288 estic Use—  80x 30,530 30,077	1   15     Re	# Rac ** Auto	Hopper 10, 255 18,717	Cov. Hopper 4,290	Tank 2,792 6,349 Tank 6,295**	Refrig- erator 2,042 2,320 Refrig- erator 4,928	112 265 Caboose 88	195 2,135 Other 2,659	4 3 7 9
Coach   Comb.   Sleeping   Dining   Club   Express   MU   Other	reight-Train C	MENT  ars Ordered  ars Delivered  ny shop figures. Sany shop figure	ORI for Domes d for Domes	Box 10,060 4,288 estic Use—  30,530 30,077 n Railway Car	Flat 721 1,214  -by Type  Flat 1,058 2,857 Institute	*** Rac *** A // *** M // ***	Hopper 10, 255 18,717	Cov. Hopper 4,290	Tank 2,792 6,349 Tank 6,295**	Refrig- erator 2,042 2,320 Refrig- erator 4,928	112 265 Caboose 88	195 2,135 Other 2,659	4 3 7 9
35 2 2 6 1 25 6 1 56	reight-Train C	MENT  ars Ordered  ars Delivered  ny shop figures. Sany shop figure	ORI for Domes d for Domes	Box 10,060 4,288 estic Use—  30,530 30,077 n Railway Car	Flat 721 1,214  -by Type  Flat 1,058 2,857 Institute	Gondola 11,069 4,706  Gondola 10,053 4,840	Hopper 10,255 18,717  Hopper 31,070 19,069	Cov. Hopper 4,290	Tank 2,792 6,349 Tank 6,295**	Refrig- erator 2,042 2,320 Refrig- erator 4,928 2,420	112 265 Caboose 88	195 2,135 Other 2,659	4' 3'
assenger-Train Cars Delivered for Domestic Use—by Type  Self.  Coach Propelled Sleeping Dining Postal Express Milk Other 44 12 1 6 41 77 521 3	reight-Train C	MENT  ars Ordered  ars Delivered  ny shop figures. Sany shop figure	ORI for Domes d for Domes	Box 10,060 4,288 estic Use—  30,530 30,077 n Railway Car	by Type  Flat 721 1,214  -by Type  Flat 1,058 2,857 Institute  -by Type	# Rac ** Auto	Hopper 10,255 18,717 Hopper 31,070 19,069	Cov. Hopper 4,290	Tank 2,792 6,349 Tank 6,295**	Refrig- erator 2,042 2,320 Refrig- erator 4,928 2,420	112 265 Caboose 88 200	195 2,135 Other 2,659 1,486	4 39 7 96 67
Self. Baggage Exp., Ref.,  Coach Propelled Sleeping Dining Postal Express Milk Other  44 12 1 6 41 77 521 3	COUIP/ reight-Train Co reight-	ars Ordered  ars Delivered  ny shop figures. Spany shop figure.  Cars Ordered	oRI for Domes d for Domes course: American	DERS  stic Use—  10,060 4,288 estic Use—  30,530 30,077 n Railway Car  nestic Use—	by Type  Flat 1,058 2,857 Institute	## Rac ** Auto	Hopper 10 255 18,717 Hopper 31,070 19,069	Cov. Hopper 4,290 Cov. Hepper 8,577	Tank 2,792 6,349 Tank 6,295** 6,131	Refrig- erator 2,042 2,320 Refrig- erator 4,928 2,420 Baggage Express	112 265 Caboose 88 200	195 2,135 Other 2,659 1,486	77 99 65
Coach Propelled Sleeping Dining Postal Express Milk Other 44 12 1 6 41 77 521 3	reight-Train C	ars Ordered ars Delivered ny shop figures. Sony shop figure Cars Ordered	ORI for Domes d for Domes cource: American	DERS  stic Use—  10,060 4,288 estic Use— 30,530 30,077 n Railway Car  nestic Use—	by Type  Flat 721 1,214  -by Type  Flat 1,058 2,857 Institute  -by Type  Coacl 35	Gondola 11,369 4,706  Gondola 10,053 4,840	Hopper 10,255 18,717  Hopper 31,070 19,069	Cov. Hopper 4,290	Tank 2,792 6,349 Tank 6,295** 6,131	Refrig- erator 2,042 2,320 Refrig- erator 4,928 2,420 Baggage Express 25	112 265 Caboose 88 200	195 2,135 Other 2,659 1,486	3 7 9
Coach Propelled Sleeping Dining Postal Express Milk Other 57	reight-Train C  57*  reight-Train C  57*  reight-Train C  56  reight-Train C  57*  S6  Eleven month compo  Twelve month comp	ars Ordered  ars Delivered  ny shop figures. Sany shop figure  Cars Ordered	ORI for Domes d for Domes ource: Americal	DERS  Stic Use  10,060 4,288 estic Use 30,530 30,077 n Railway Car	by Type  Flat 721 1,214  -by Type  Flat 1,058 2,857 Institute  -by Type  Coaci 35 37	Gondola 11,369 4,706  Coach Comb	Hopper 10,255 18,717  Hopper 31,070 19,069	Cov. Hopper 4,290	Tank 2,792 6,349 Tank 6,295** 6,131	Refrig- erator 2,042 2,320 Refrig- erator 4,928 2,420 Baggage Express 25	112 265 Caboose 88 200	195 2,135 Other 2,659 1,486	41 39 7 7 96 67
57 44 12 1 6 41 77 521 3	reight-Train C  57*  reight-Train C  57*  reight-Train C  56  reight-Train C  57*  S6  Eleven month compo  Twelve month comp	ars Ordered  ars Delivered  ny shop figures. Sany shop figure  Cars Ordered	ORI for Domes d for Domes ource: Americal	DERS  Stic Use  10,060 4,288 estic Use 30,530 30,077 n Railway Car	by Type  Flat 721 1,214  -by Type  Flat 1,058 2,857 Institute  -by Type  Coaci 35 37	Gondola 11,369 4,706  Gondola 10,053 4,840  Coach Comb 2 0	Hopper 10.255 18,717  Hopper 31,070 19,069	Cov. Hopper 4,290	Tank 2,792 6,349 Tank 6,295** 6,131	Refrig- erator 2,042 2,320 Refrig- erator 4,928 2,420 Baggage Express 25 102	112 265 Caboose 88 200	195 2,135 Other 2,659 1,486	41 39 7 7 96 67
	reight-Train C	ars Ordered  ars Delivered  ny shop figures. Sany shop figure  Cars Ordered	ORI for Domes d for Domes ource: Americal	DERS  Stic Use  10,060 4,288 estic Use 30,530 30,077 n Railway Car	by Type  Flat 721 1,214  -by Type  Flat 1,058 2,058 2,058 1,058 35 37  e—by Type	# Rac ** Aut ** ** M // M	Hopper 10,255 18,717  Hopper 31,070 19,069	Cov. Hopper 4,290  Cov. Hopper 8,577	Tank 2,792 6,349 Tank 6,295** 6,131	Refrig- erator 2,042 2,320 Refrig- erator 4,928 2,420 Baggage Express 25 102	112 265 Caboose 88 200	195 2,135 Other 2,659 1,486	77. 41. 35. 77. 96. 67.

N	1957	FREIGHT
11	CAR	ORDERS

Weight Ordered	Date Delivery Builder
47,000 January 52,800 October 63,500 March 75,657 March 86,900 June 78,100 June	Mar. '58 GATC December National Steel Jan. '58 Company Shops Feb. '58 Company Shops Mar. '58 Pacific Car Mar. '58 Pacific Car

# the acf retractable trailer-hitch



provides speed, safety and lading protection

FAST, SIMPLE, SAFE LOADING AND UN-LOADING. Hitch retracts to a height of 8 inches. One man raises and locks hitch in less than 3 minutes, using only an air or electric portable power wrench. There's no need to get underneath the trailer—hitch is

thus safer to use.

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with any standard trailer!

**LOW INITIAL COST.** Maximum claim prevention and a high return in savings on *labor*.

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# 20-year overhaul of Reading "Crusader" proves...



# beauty of stainless steel is more than skin deep

In 1937 the Reading Railroad put the all-stainless steel "Crusader" in service on the New York to Philadelphia run.

This April, twenty years and almost two million miles later, they brought the "Crusader" in for its third complete overhaul. The condition of its stainless steel completely justified the confidence shared by the Reading and the Budd Company, the "Crusader's" builders, in nickel-containing stainless as a highly practical material for railroad car construction.

Condition shows it's inexpensive, too

In the photos above, taken during

overhaul, you can see for yourself the excellent condition of the "Crusader's" stainless steel exterior skin and structural members.

No scale. No corroded parts to be replaced. Accumulated dust under the sheathing was easily removed by scraping. Sheathing itself was restored to original condition merely by wiping. With only this minor maintenance, the "Crusader's" stainless steel looks — and is — as good as new, as modern as tomorrow!

There's more to stainless steel than meets the eve

In addition to such permanent resistance to corrosion, and lasting good

appearance, stainless steel has a high strength-to-weight ratio. Permits lighter cars, important savings in fuel costs. And builders find that its ductility and weldability permit fast, simple fabricating methods... economical production.

"Nickel Alloys in Railroad Equipment," a 32-PAGE BOOKLET, describes how nickel-containing stainless steels and other nickel alloys can lower operating and production costs and improve safety factors in rolling stock, locomotives and trackwork. For your copy, just write Inco.

The International Nickel Company, Inc.
67 Wall Street MCO New York 5, N. Y.

NICKEL ALLOYS PERFORM BETTER LONGER



Laying and welding N-S-F panels in one of 800 new boxcars at the B&O's DuBois, Pa., shops.

### N-S-F® helps



# LOOK TO the future

THIS CAR IS EQUIPPED WITH

(NAILABLE (CSTEEL OF FLOOR)

USE 20(4"LG) OR 30(4½"LG) PENNY NAILS

TO SECURE BLOCKING

BY NAILING INTO GROOVES

The stencil smart shippers look for in freight cars. They know it marks a car with better lading protection. And smart railroaders know N-S-F can help reduce railroads' Cause F loss and damage claims.

N-S-F is a registered trademark of Stran-Steel Corp.

Progressive railroads get longer life from new and old cars by applying economical NAILABLE STEEL FLOORING. For N-S-F adds structural strength to the underframe, helps keep cars off the rip tracks for floor repair because N-S-F withstands heavily loaded lift trucks and repeated nailing. Moreover, it makes Class A cars available to shippers for all ladings for the life of the car. Safer, too, for shippers' personnel.

You can obtain informative performance and cost studies on the application of N-S-F to both new and old cars from our representatives in Chicago, New York, Philadelphia, St. Louis, Cleveland, San Francisco, Minneapolis and Atlanta. In Canada, N-S-F is made and sold by International Equipment Co., Ltd., Montreal.

NAILABLE STEEL FLOORING
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STRAN-STEEL CORPORATION

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#### (Continued from page 105)

Purchaser	No.	Type	Capacity	Ft.	ength In.	Weight	Date Prdered	Date or Delivery	Builder
Ann Arbor	50	Cov. Hopper	140,000	29	3	48,900	Dec. '57	Jan. '58	ACF
Atlantic Coast Line	9	Flat Cov. Hopper	140,000	57 29	9	126,500 51,000	April	NovDec. October	Company Shops Pullman Standard
Baltimore & Ohio	45	Cov. Hopper	140,000	41	1	61,300	January	September	Pullman Standard
	2,000	Hopper	140,000	40	8	49,800	April	'57-'58	Bethlehem Steel Bethlehem Steel
	150	Gondola Flat	140,000 250,000	65 57	6	65,000 126,400	June	1958 1958	Company Shops
	1,000	Box	100,000	40	6	48,600	April	'57-'58	Company Shops
	1,000	Gondola Hopper	140,000	52 33	6	60,100 41,600	January	'57-'58 June	Company Shops Company Shops
	500	Gondola	140,000	46	0	53,000	January	June	Company Shops
	1,000	Hopper	100,000	33 46	0	41,600 53,000	March	August	Company Shops Company Shops
Bangor & Aroostook	225 400	Gondola Box	100,000	50	6	153,700	May March	August November	ACF
	150	Rack	100,000	48	6	145,300	October	May '58 Apr. '58	Magor Car Thrall Car
Bessemer & Lake Erie	1	Flat Flat	270,000 250,000	54 63	0	93,000	October October	Apr. '58	Thrall Car
Canadian General Transit	2	Cov. Hopper 3	140,000	36	0	50,400	January	March	Simard Industries
	12	Tank ③ Tank ③	140,000	33	8	60,800	Feb.	Mar. '58 SeptNov.	Canadian Car Canadian Car
	7	Tunk 3	140,000	37	9	60,400	May	Feb. '58	Canadian Car
	10	Tank 3	100,000	40 39	8	64,500 50,100	June	Feb. '58 June '58	Canadian Car
	24	Tank 3	80,000	36	8	50,000	July	Apr. '58	Canadian Car
	6	Tank 3 Tank 3	140,000	40	1	51,000 50,800	July	May '58 NovDec.	Canadian Car Canadian Car
	30 14	Tank 3	80,000	37	9	46,000	July	June '58	Canadian Car
	35	Tank 3	80,000	39	6	46,000	June	Mar. '58	Canadian Car Canadian Car
	35 15	Tank ®	80,000	38	6	49,100 47,000	lune	'57-'58 NovDec.	Canadian Car
	25	Tank 3	100,000	40	1	50,100	June	Apr. '58	Canadian Car
	100	Cov. Hopper Assort, Tank	140,000	41	1	61,400	August 1957	December '57-'58	Pullman-Standard Canadian Car
Canadian National	300	Box	100,000	40	6	45,500	April	November	Pullman-Standard
	100	Flat	100,000	53	6	*****	April	1st qtr '58	Magor Car
	100	Hopper Exper, Ref. 3	140,000	40 42	11	50,700	April May	November 1958	ACF National Steel
	225	Hopper	140,000	40	8	52,700	May	December	Eastern Car
	15	Caboose Flat	336,000	30	0	*****	May	1 st qtr '58 1 st qtr '58	International Canadian Car
	2	Flat	120,000			*****	June	1 st qtr '58	Canadian Car
	80	Ore	165,000	19	11	43,600	luly	November	National Steel National Steel
	85	Air Dump	100,000 275,000	31	7	*****	September October	Apr. '58 1st qtr '58	Canadian Car
	80	Refrigerator	60,000	29	6	*****	November	2nd atr '58	Canadian Car
	13 15	Hopper ® Stock ®	80,000	36 36	0	*****	November November	2nd atr '58 2nd atr '58	Canadian Car Eastern Car
	20	Air Dump	60,000	19	8	*****	November	2nd atr '58	Eastern Car
	700	Tr. Hopper Tr. Hopper	160,000	40		49,500	December	April '58	Eastern Car National Steel
	250	Refrigerator	100,000	40	ő	49,500	December December	May '58	National Steel
	200	Tr. Hopper	140,000	22	* *	*****	December	1958	Canadian Car
	300	Gondola Flat	140,000	65	6	*****	December December	2nd atr '58	Canadian Car Marine Industries
	500	Automobile 3	100,000	50	6	*****	February	1958	Canadian Car
Canadian Pacific	500	Flat Box	130,000	77	9	80,000 43,900	April September	November Jan. '58	Strick Trailer National Steel
	475	Tr. Hopper	160,000	40	8	49,500	October	Apr. '58	National Steel
	300	Gondola 3 Stock 3	140,000	* *		*****	October October	1 st atr '58 3rd atr '58	Canadian Car Canadian Car
	50	Gondola	140,000	65	6	*****	December	1st qtr '58	Canadian Car
Central of Georgia	500	Tr. Hopper	140,000	40	6	51,000	July	September	ACF
Chesapeake & Ohio	50	Gondola	140,000	50 65	6	54,500 62,000	November April	Jan. '58 December	Pullman-Standard Pullman-Standard
Chicago & Eastern Illinois	300	Hopper	140,000	40	8	50,900	January	SeptOct.	Bethlehem Steel
	50	Caboose ③ Gondola	140,000	33 65	6	49,200 58,200	April April	OctNov. NovDec.	Company Shops Bethlehem Steel
	10	Flat ®	250,000	57	3		May	Jan. '58	Company Shops
Chicago & North Western	40	Box	100,000	40	6	145,900	June	November Jan. '58	Pullman-Standard Magor Car
	200	Air Dump Gondola	100,000	31 65	10	57,500 62,000	September September	Jan. '58	Pullman-Standard
	120	Cov. Hopper	140,000	41	1	62,000	September	Mar. '58	Pullman-Standard
Chicago, Burlington & Quincy	155	Cov. Hopper Box	140,000	29 40	3	50,700 46,000	September	Mar. '58 June '58	Pullman-Standard Company Shops
and a summer of the summer of	100	Box	100,000	50	6	78,000	January	luly '58	Company Shops
	350 50	Cov. Hopper Gondola	140,000	29 65	6	51,000 64,500	January	Sept. '58 Nov. '58	Company Shops
	75	Cov. Hopper	100,000	29	6	54,200	January	Sept. '58	Company Shops GATC
Chicago Great Western	15	Tank Refrigerator 3	100,000	41	1	65,600	February	August Jan. '58	ACF Pacific Car
Chicago, Milwaukee, St. Paul & Pacific	100	Cov. Hopper	140,000	29	3	50,800	January	lan '58	Pullman-Standard
	50	Flat 1	140,000	60	0	62,600	January	Jan. '58	Pullman-Standard
Chicago, Rock Island & Pacific	55 400	Gondola Gondola	140,000	65 52	6	60,530 58,000	February June	Jan. '58 Mar. '58	Bethlehem Steel Pullman-Standard
Cincago, Nock Intale a vacine.	150	Box	100,000	50	6	54,600	June	Jan. '58 Feb. '58	Pullman-Standard
	100	Cov. Hopper Flat	140,000	41 53	6	59,000	November	Feb. '58 1st qtr '58	ACF Company Shops
Colorado & Southern	25	Box	100,000	50	6	51,600 43,500 50,800	June January	July '58 Oct. '58	Burlington Shops
C.I I W	60	Cov. Hopper	140,000	29	3	50,800	January	Oct. '58	Burlington Shops
Colorado & Wyoming	25 5	Gondola ® Gondola	140,000	52 65	6	45,000 83,000	January	Mar. '58 OctNov.	Pullman Standard Company Shops
Consolidated of Cuba	250	Box	100,000	40	6	46,200	April	December	ACF
Delaware & Hudson 1	,000	Hopper Flat	140,000	40 45	8	52,000 59,000	May	1958-62 2nd atr '58	Bethlehem Steel Company Shops
	2	Flat	500,000	44	4	99,700	July	2nd atr '58	Company Shops
Daniel & Bia Granda Waster	1	Flat	250,000	57	9	124,600	July	2nd atr. '58 1st art '58	Company Shops
Denver & Rio Grande Western	300 50	Tr. Hopper Cov. Hopper	140,000	40	0	55,000 62,000	September September	1st qtr '58 1st qtr '58	ACF ACF
Detroit & Mackinac	25	Hopper	140,000	42	10	54,000	April	Feb. '58	GATC
Duluth, South Shore & Atlantic	100	Hopper Cov. Hopper	100,000	29 41	6	54,700 63,500	October February	Nov. '58 July-Aug.	GATC Greenville Steel
MINISTER STATE OF THE PARTY OF	6	Flat	280,000	58	4	138,000	November	2nd atr '58	Company Shops
Companyil del Davides	1	Flat	400,000	72	6	188,000	November	2nd gtr '58	Company Shops
Ferrocarril del Pacifico	250 150	Box Gondola	100,000	40 41	6	45,000 45,600	October March	1958 Feb. '58	Constructora Nacional Magor
	50	Tr. Hopper	140,000	40	6	51,300	May	November	ACF
	55	Cov. Hopper Flat	140,000	34 55	3	50,700 46,500	April	December August	Pullman-Standard Thrail
	-				4	401000	20110	- Allesi	

nickel steel. steel underframe. reported in last annual issue. sy steel.

Purchaser	No.	Tuna	Committee	Le	ength [-	14/-:-64	Ordered	Date	Builder
Georgia		Type	Capacity 140,000	Ft.	In. 8	Weight 45,400	Ordered	Delivery February '58	ACF
Grand Trunk Western	300	Box	100,000	40	6	45,600 45,500	September May	OctNov.	Pullman-Standard
	100	Hopper Flat	140,000	40 52	6	50,700 51,000	May May	November 1st gtr '58	ACF Magor Car
Great Northern	15 750	Caboose Box	100,000	30 40	0	48,300 50,000	July June	1st atr '58 Sept. '58	International Company Shops
	250	Box	100,000	50	6	56,000	June	Sept. '58	Company Shops
	100	Cov. Hopper Cov. Hopper	140,000	29 41	3	50,700 62,000	April	May '58 May '58	Pullman-Standard Pullman-Standard
	30	Flat ① Flat ①	100,000	53 53	6	57,000 61,500	June June	June '58 June '58	Company Shops Company Shops
Gulf, Mobile & Ohio	10	Tank	140,000	41	1	65,000	February	August	ACF
Illinois Central	50 50	Gondola Caboose	140,000	65 28	6	57,500 52,600	February April	November Jan. '58	Bethlehem Steel Company Shops
	100	Flat (1) Cov. Hopper	250,000 140,000	57 29	9	125,000 52,000	May October	December December	Company Shops ACF
Jersey Central	100	Cov. Hopper	140,000	41	1	62,000	October	Jan. '58	ACF Pullman-Standard
	50	Box Gondola	140,000	40 65	6	45,400 57,800	January January	October October	Bethlehem Steel
Kansas City Southern	75 14	Gondola Cov. Hopper	140,000	65	6	60,000 52,800	October 1	November December	Bethlehem Steel Pullman-Standard
Lancaster & Chester Lehigh & New England	100	Bulk Cement Bulk Cement	140,000	29	3	52,000 50,700	May	May May	Greenville Steel Pullman-Standard
	200	<b>Bulk Cement</b>	140,000	29	3	49,200	May	May	ACF
Lehigh Valley	5 25	Box Flat	100,000	40	6	44,500	August September	August Jan. '58	Pullman-Standard Company Shops
Long Island	6	Flat (3) Caboose	80,000	45 21	10	60,000 43,000	September September	Mar. '58 Mar. '58	Company Shops International
Louisville & Nashville	1	Hopper	140,000	42	10	53,900	December	December	Pullman-Standard
	250 225	Box Box	100,000	50 40	6	62,000 45,800	December December	Jan. '58 Jan. '58	Pullman-Standard Pullman-Standard
	100	Gondola Cov. Hopper	140,000	40 41	0	59,000	December December	Apr. '58 Mar. '58	ACF ACF
	1,100	Gondola	140,000	45	Ó	*****	December	2nd atr '58	Pullman Standard
	100	Gondola Gondola	140,000	52 65	6	*****	December December	2nd qtr '58 Mar. '58	Pullman-Standard Greenville Steel
Maine Central	200 150	Box ③ Refrigerator ③	100,000	40 33	6	35,000 58,000	January October	October Apr. '58	ACF Pacific Car
Minneapolis & St. Louis	50	Box	100,000	50	6		August	Jan. '58	Pullman-Standard Pullman-Standard
Minneapolis, Northfield & Southern	101	Cov. Hopper Box	140,000	35 40	6	50,700 45,400	September May	Apr. '59 November	Pullman-Standard
Minneapolis, St. Paul & Sault Ste Marie	100	Flat Gondola	140,000	53 52	6	******	******	1958 1958	Company Shops Company Shops
	10 50	Gondola	140,000	65 35	6	50,700	July	1958 December	Company Shops Pullman-Standard
	25	Hopper Hopper	140,000	47	7	62,000	June	September	Pullman-Standard
	50 25	Hopper Cov. Hopper	140,000	35 39	3	51,000	June April	Jan. '58 July	Pullman-Standard GATC
Missouri Pacific	50 300	Cov. Hopper Box (3)	140,000	29 50	6	56,800 56,200	August October	Aug. '58 3rd gtr '58	GATC Company Shops
	600	Box 3	100,000	40	6	46,700	October	4th gtr '58	Company Shops
	100	Gondola 3 Gondola 3	140,000	65 52	6	68,000 53,300	October October	June '58 1st gtr '58	Company Shops Company Shops
	100	Cov. Gondola 3 Gondola 3	140,000	52 52	6	66,500 53,300	October October	May '58 May '58	Company Shops Company Shops
Monon	4	Caboose			5			1957	Company Shops
National of Mexico	100	Caboose Single Flexible Van	60,000	28 41	2	46,800 43,500	May April	Feb. '58 July	ACF Strick Trailers
	150	Well ③ Twin Flexible Van	192,000	45 79	10	58,000 57,000	June August	Mar. '58 Apr. '58	Company Shops Strick Trailers
New York Chinana 8 St. Lauis	22	RPO Flexible Van	120,000	79	10	57,000	December	2nd atr '58	Strick Trailers GATC
New York, Chicago & St. Louis	4	Hopper 3 Hopper 3	140,000	29	6	56,900 56,900	May November	June Jan. '58	GATC
Norfolk & Western	1,500	Caboose Hopper	60,000 140,000	30 36	10	50,800 53,000	April September	Mar. '58	International Company Shops
Norfolk Southern	25 30	Hopper Hopper	110,000	33 40	0	39,500 52,200	February	May '58 Jan. '58	Bethlehem Steel Bethlehem Steel
North American Car	125	Cov. Hopper 3	140,000	41	1	62,000	March	September	Pullman-Standard
	75	Cov. Hopper Refrig. 3	140,000	41	1	59,000	Feb.	November June	ACF Pacific Car
	90 40	Mech. Refr. ® Gondola ®	100,000	44 65	5	80,000 58,200	July December	Feb. '58 December	Pacific Car Bethlehem Steel
M 4 9 10	2	Cov. Hopper®	140,000	41	1	62,000	December	Jan. '58	Pullman-Standard
Northern Pacific	25	Cov. Hopper Cov. Hopper	140,000	29	6	57,600 57,600	January November	3rd atr '58 Feb. '58	GATC
	450	Box Refrigerator	100,000	40	6	50,600	November November	2nd atr '58 2nd atr '58	Company Shops Company Shops
	100	Box Refrigerator	100,000	50 49	10	56,800	April April	3rd atr '58 3rd atr '58	Company Shops Company Shops
Northern Refrigerator	100	Refrig.	70,000	33	3	58,000	October	Apr. '58	Pacific Car
Pacific Fruit Express	500 500	Refrigerator Refrigerator	100,000	44 35	6	73,500 62,800	July	Apr. '58 Sept. '58	SP Equipment Co. SP Equipment Co.
Pennsylvania Philadelphia, Bethlehem & New England	300	Cov. Hopper Gondola	140,000	99 65	3	51,600 60,530	August	Apr. '58 December	Pullman-Standard Bethlehem Steel
Pittsburgh & Lake Erie	250	Cov. Hopper	140,000	29	3	49,100	January	November	ACF
	150	Cov. Hopper Cov. Hopper	140,000	29 41	3	51,200 61,600	January	August September	Pullman-Standard Pullman-Standard
	500	Gondola Hopper	140,000	65 40	6	61,600 67,700 51,300	July	Mar. '58 June '58	Greenville Steel Despatch Shops
Quebec, North Shore & Labrador	3	Caboose	80,000	30	0	49,500	Dec. '56 @	October	International
Rutland	2	Box Caboose (1)	80,000	40 33	11	47,900 49,500	January May	April	Pullman-Standard W. P. Shops
St. Louis-San Francisco	20 40	Gondola ① Box	140,000	46 50	6	57,000 67,300	May February	Mar. '58 June	ACF Pullman-Standard ,
	40	Box	100,000	50	6	67,300 62,500	February	June	Pullman-Standard
St. Louis Southwestern	100	Hopper Gondola	140,000	65	6	50,500 58,700	March April	October November	Pullman-Standard Bethlehem Steel
	25	Refrigerator Flat 3	100,000	40 62	6		July June	Jan. '58 Jan. '58	Pacific Car Company Shops
Savannah & Atlanta	5	Box	100,000	40	6	45,900	October	December	Pullman-Standard
Southern 1	500	Gondola Tr. Hopper	140,000	52 42	10	60,000 55,000	March March	May '58 Jan. '58	Pullman-Standard ACF
	400	Cov. Hopper Cov. Hopper	140,000	29 41	3	51,800 64,000	March March	OctNov. NovDec.	Pullman-Standard Pullman-Standard
	200	Box	100,000	50	6	66,000	March	Jan. '58	Pullman-Standard Greenville Steel
	100	Gondola Cov. Hopper	140,000	65	6	66,300 58,000	March April	OctNov. July '58	GATC
Southern Pacific	20 150	Flat Gondola	250,000 140,000	62	9	128,000 61,000	April May	Apr. '58 NovDec.	Company Shops Greenville Steel
				00	-	0.,000		1 1011 07000	

<sup>\*</sup> All freight cars are steel construction unless otherwise noted.

① Steel underframe.
② Aluminum.
③ Steel frame.
③ Cast nickel steel.
⑤ Cast steel underframe.
③ Not reported in last annual issue.
④ Alloy steel.

# Another Advance ...

# new Holland Ride Stabilizer RS-2

upgrades existing freight car trucks to HIGH SPEED SERVICE AT A SAVING OF OVER 80% of NEW TRUCK COSTS

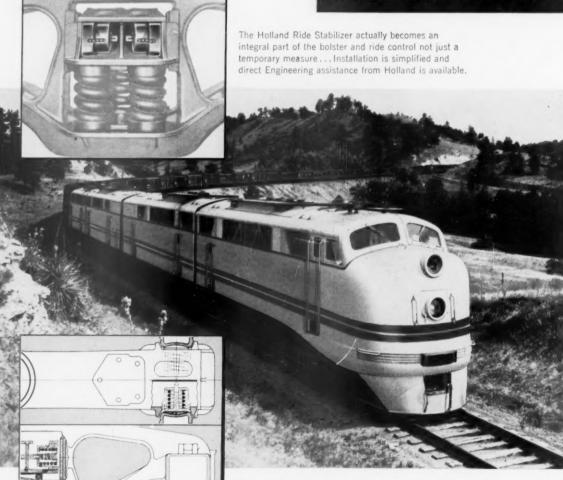
New

- Center Retention Means for simplified assembling and dismantling
- Larger control spring for full face pressure longer life

An Eastern Railroad is now upgrading 2800 of their old trucks with new Holland RS-2 units for service under 1400 rebuilt freight car bodies. Enjoy the benefits of reduced damage claims, longer equipment life and longer service from roadbeds. Takes the jolt and jar out of that old freight car... Stabilizes the ride laterally, vertically and longitudinally just like the new modern trucks ... The Holland Style RS-2 can be applied to all freight car truck bolsters of A.A.R. approved design.

Write for our new Tell-All Bulletin RS-2 and for complete information... Ask about our on-the-job engineering service.





Cutaway top view shows new large control spring Cutaway side view shows new Center Retention Means

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well, SINCE
YOU ASK, boy, oo Oo.

I'll tell you...
the weather is
very nice up here. It's very pleasant
being a giraffe — one gets such
special treatment. One feels kind
of superior, don'cha know?
Take for example . . .

this

# SUPERIOR

they protected o.o. o.

This is the new 15-foot door in case they want to take me out sideways! The trip was very enjoyable — no cinders or drafts on the back of my neck with the SUPERIOR weather baffles. I got good attention en route, too, 'cause one man could easily open the door to feed me.



CAR DOOR COMPANY 332 S. MICHIGAN AVE.



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#### (Continued from page 111)

				Len	igth		Date	Date of	
Purchaser	No.	Type	Capacity	Ft.	ln.	Weight	Ordered	Delivery	Builder
	200	Hopper	140,000	34	3	51,000	May	Mar. '58	Pullman-Standard
	600	Gondola	197,000	27.	0	52.000	August	July '58	Company Shops
	200	Gondola	140,000	52	6	56,500	Nov.	May '58	ACF
Texas & Pacific	75	Box	100,000	50	6	56,000	December	Feb. '59	Company Shops
	25	Box	140,000	50	1	75,300	December	Mar. '59	Company Ships
	100	Flat	100,000	53	6	56,800	December	May '59	Company Shops
Tidewater Southern	5	Gondola	140,000	45	10		May	Mar. '58	ACF
	10	Box	94,000	50	0		May	Nov. '58	Pacific Car
Toronto, Hamilton & Buffalo	10	Cov. Hopper	158,000	36	0	51,200	January	September	National Steel
	50	Gondola	159,000	52	6	50,500	January	September	National Steel
Trong	1	Caboose	60,000	30	1	60,000	July	Mar. '58	International
Union Pacific	500	Gondola	140,000	52	6	60,200	February	December	Bethiehem Steel
	500	Gondola	140,000	46	0	57,000	April	1st att '58	ACF
	100	Cov. Hopper	140,000				February	3rd atr '58	GATC
	100	Cov. Hopper	140,000	41	1	56,500	April	1st gtr '58	Pullman-Standard
	50	Tank	100,000				April	2nd atr '58	GATC
	525	Box	100,000	40	6	49,400	September	4th gtr '57	Pullman-Standard
	200	Box	100,000	50	6	56,000	December	Apr. '58	Pullman-Standard
	200	Gondola	140,000	46	0	57,000	December	Mar. '58	ACF
	200	Gondola	140,000	52	6	60,200	December	December	Bethlehem Steel
Union Tank Car	41	Tank	80,000	0.0			1957	'57-'58	Union Tank
	655	Tank	100,000				1957	'57-'58	Union Tank
	53	Tank	140,000				1957	'57-'58	Union Tank
	1	Tank	200,000			69,600	December	1958	Union Tank
Utah	200	Hopper	140,000	42	10	54,100	April	1st qtr '58	Pullman-Standard
Virginian	500	Hopper	140,000	40	0	54,700	July	June '58	Company Shops
Wabash	4	Cov. Hopper	140,000	41	1	61,400	March	March	Pullman-Standard
	50	Hopper	140,000	29	3	51,800	March	June-July	Greenville Steel
	100	Gondola	140,000	65	6	60,530	March	October	Bethlehem Steel
	52	Cov. Hopper	140,000	29	3	48,900	December	Jan. '58	ACF
	50	Cov. Hopper	140,000	41	1	59 000	December	Feb. '58	ACF
Western Maryland	50	Gondola	140,000	65	6	61,400	June	Jan. '58	Greenville Steel
	500	Hopper	140,000	40	8	54,000	June	Feb. '58	Bethlehem Steel
Western of Alabama	25	Hopper	140,000	40	8	45,600	September	Feb. '58	ACF
Western Pacific	110	Refrigerator	100,000	50	0	71,200	May	December	Pacific Car
	100	Gondola	140,000	46	0	57,000	May	1st qtr '58	ACF
	10	Cov. Hopper	140,000	41	1		July	1st gtr '58	Pullman Standard
	30	Cov. Hopper	140,000	29	3		July	1st atr '58	Pullman-Standed
Wilson Car Lines	200	Refrigerator	80,000	39	11	61,300	January	November	Pacific Car
	200	Refrigerator	80,000	39	11	61,300	September	Apr. '58	Pacific Car

All freight cars are steel construction unless otherwise noted.

Steel underframe.
Aluminum.
Steel frame.
Cast nickel steel.
Cast steel underframe.
Not reported in last annual issue.
Alloy steel.

## 1957 LOCOMOTIVE ORDERS

- No and								
		Whee!						
		Arrange-		Weight	Horse-	Date	Delivery	
Purchaser	No.	ment	Service	Lb.	powe	Ordered	Date	Builder
T OTCHOSET		71111111		201	po	0.00.00	2.010	
Akron, Canton & Youngstown	1	B-B	Gen. Pur.	246,000	1,600	January	March	Fairbanks, Morse
Alabama State Docks Ry	1	B-B	Switching	222,400	1.000	February	October	Alco Products
Atlantic Coast Line	9	B-B	Freight	226,100	1.750	January	May	Electro-Motive
Baltimore & Ohio	60*	B-B	RdSw.	247,500	1,750	January	July	Electro-Motive
Dolliniore & Olio	8*	B-B	Switching	248,000	1.200	January	May	Electro-Motive
	6*	B-B	Switching	230,000	1.000	January	June	Alco Products
	9	B.B	Switching	230,000	1,000	February	August	Alco Products
	5*	B-B					March	Fairbanks, Morse
		B-B	RdSw.	246,000	1,600	January		
	5		Switching	246,000	1,200	February	April	Fairbanks, Morse
	27 *	B-B	RdSw.	247,500	1,750	September	Jan. '58	Electro-Motive
Birmingham Southern	2	B-B	Switching	246,000	1,200	April	August	Electro-Motive
British Columbia Electric	4	B-B	Freight	230,000	900	October	April '58	G. M. Diesel
Canadian National	3	C-C	RdSw.	230,000	1,200	une	June '58	G. M. Diesel
	16	B-B	RdSw.	224,000	1,200	June	1957-58	G. M. Diesel
	30	A-A	RdSw.	240,000	1,200	June	1957-58	G. M. Diesel
	19	B-B	Switching	234,000	900	June	1st half '58	G. M. Diesel
	17	B-B	RdSw.	231,000	1.750	lune	1st atr '58	G. M. Diesel
	14	B-B	RdSw.	248,000	1.750	lune	1st atr '58	G. M. Diesel
	17	R-R	Passenger	260,000	1.750	lune	2nd atr '58	G. M. Diesel
	30	B-B	RdSw.	248,000	1,800	June	1957-58	Montreal Locomotive
	9	8-8	RdSw.	245,000	1.750	lune	December	Electro-Motive
	2	B-B	RdSw.	248,000	1.000	lune	November	Alco Products
Canadian Pacific	5	B-B	Switching ®	89.000	500	September	March '58	Canadian Locomotive
Canadian Facinc	2	B-B	Switching	150,000		September	September	Montreal Locomotive
		B-B			4.000	September	1958	
	31		RdSw.		1,200			G. M. Diesel
	23	B-B	RdSw.		1,750	September	1958	G. M. Diesel
	52	B-B	RdSw.	*****	1,800	September	1958	Montreal Locomotive
	11	B-B	Switching	****	660	September	1958	Montreal Locomotive
Central Vermont	2	B-B	RdSw.	251,000	1,750	July	November	Electro-Motive
Chesapeake & Ohio	25	B-B	RdSw.	258,000	1,750	January	August	Electro-Motive
Chicago & North Western	32	B-B	RdSw.	254,000	1,750	Dec. '56 @	1957-1958	Electro-Motive
Chicago, Burlington & Quincy	30	C-C	RdSw.	232,000	1,750	January	September	Electro-Motive
Chihuahua al Pacifico	1	B-B	General	246,000	1,600	April	December	Fairbanks, Morse
	2	B-B	General	246,000	1,600	December		Fairbanks, Morse
Colorado & Wyoming	1	B-B	Switching	230,000	900	lanuary	July	Electro-Motive
Duluth, Missabe & Iron Range	28	C-C	RdSw.	387,000	1.750	November	1st gtr '58	Electro-Motive
Ferrocarril del Pacifico	1	B-B	RdSw.	260,000	1,800	lune	October	Alco Products
Grand Fall	3	B-B	RdSw.	140,000	720	March	December	General Electric
Grand Trunk Western	2	B-B	Switching	228,970	1,000	July	November	Alco Products
Great Northern	6	B-B	RdSw.	253,000	1.750	November	Mar. '58	Electro-Motive
Great Normern	8	C-C	RdSw.	345,000	1,750	November	Apr. '58	Electro-Motive
	9	C-C	RdSw.	351,000	1.750	November	Apr. '58	
100-1-6-1		B-B						Electro-Motive
Illinois Central	70		RdSw.	246,000	1,750	July	'57-'58	Electro-Motive
London & Port Stanley	1	B-B	RdSw.	162,460	1,310	April	July	G. M. Diesel
Mississippi Export	1	B-B	RdSw.	240,000	1,750	August	October	Electro-Motive
Missouri-Kansas-Texas	6	B-B	YdSw.		1,200	August	December	Electro-Motive
New Orleans Public Belt.	2	B-B	Switching	246,720	1,200	May	October	Electro-Motive
New York Central	5	B-B	RdSw.	247,000	1,750	February	April	Electro-Motive
	30	B-B	RdSw.	247,000	1,750	February	August	Electro-Motive
	9	B-B	RdSw.	245,000	1,800	April	June	Alco Products
							J	

Notes:

\* Leased.

① All locomotives diesel-electrics unless otherwise noted.

② Diesel-hydraulic.

③ Gas turbine-electric.

④ Not reported in last year's annual issue.

(Continued on page 116)



# Illinois Central uses STANDARD Lubricating Oils



Many of the new GP's going into service on the Illinois Central, as the Road progresses with its dieselization program, are lubricated with Standard Diesel Lubricating Oils, one of the oils approved for use in the Illinois

Central's diesel fleet. This figures. Standard lubricated the I-C's steam power. STANDARD Lubricating Oils were used on the Road's first articulated diesel, the "Green Diamond."

The first diesel power on the "City of Miami" was lubricated by Standard products. These and other power units on the I-C continue operating with excellent results. They deliver hundreds of thousands of miles of service without a bearing or other part failure due to faulty lubrication. Crankcases, cylinder walls and pistons remain clean.

Get more facts about the advantages of using Standard Lubricating Oils. Write or call Railway Sales Department, Standard Oil Company, 910 South Michigan Avenue, Chicago 80, Illinois.



STANDARD OIL COMPANY

(Indiana)

#### (Continued from page 114)

No.	Wheel Arrange- ment	Service	Weight Lb.	Horse- power	Date Ordered	Delivery Date	Builder
10	B-B B-B	RdSw. RdSw.	240,000 240,000	1,750 1,800	October October	Mar. '58 Mar. '58	Electro-Motive Alco Products
20	B-B	Freight	247,000	1,800	September	December	Fairbanks, Morse Alco Products Electro-Motive
	B-B	RdSw.	248,000	1,750	July	1958	G. M. Diesel
15 13 2	8-8 8-8 8-8	RdSw. Switching General General	948,000 948,500 949,000 949,000	1,750 1,200 1,750 1,800	May May May May	Jan. '58 Jan. '58 Jan. '58	G. M. Diesel Electro-Motive Electro-Motive Alco Products
19* 6* 140* 35*	B-B B-B B-B B-B B-B B-B	General General Switching Switching Switching Switching Switching	249,000 249,000	1,750 1,800 1,750 1,800 1,000 1,750 1,200	November November April August August November November	July '58 July '58 1957 December Mar. '58 Jan. '58 May '58	Electro-Motive Alco Products Electro-Motive Alco Products Alco Products Electro-Motive Electro-Motive
25* 6 100 15	8-B B-B	Switching Freight Freight	148,000	1,800 1,750 1,750 8,500	November May February January	Apr. '58 October 3rd atr '57 1958-59	Alco Preducts Electro-Motive Electro-Motive General Electric
5	B-B B-B	RdSw. RdSw.	961,200 949,000	1,600 1,750	June March	October June	Fairbanks-Morse Electro-Motive
2 5 20	B-B B-B C-C	Freight FrtPass. RdSw.	160,000 248,000 175,500	1,425 1,900 1,320	August April March	October November 1st gtr '58	Electro-Motive Electro-Motive General Electric General Electric
2 2 18	A-1-A B-B C-C	FrtPass. Freight RdSw.	174,500 248,000 175,500	1,425 1,315 1,320	March April March	1958 September July '58	G. M. Diesel G. M. Diesel General Electric Canadian Locomotive
50	B-B B-B	FrtPass. FrtPass.	160,000 160,000	1,425	December September	Apr. '58 Mar. '58	Electro-Motive Electro-Motive
12 70	C-C B-B	RdSw. FrtPass.	175,500 160,000	1,320	June December	'57-'58 1958	Electro-Motive General Electric Electro-Motive
3	C-C	Freight	390,000	1,900	January	May	Electro-Motive
18	8-8	FrtPass.	160,000	1,425	August	Feb. '58	Electro-Motive
22	B-B	RdSw.	154,500	1,320	April	SeptOct.	General Electric General Electric
45	B-B	RdSw.	154,500	1,320	July	1st half '58	General Electric General Electric
5 4 6	8-8 8-8 8-8	Industrial RdSw. FrtPass. FrtPass. Freight	130,000 198,000 160,000 248,000 160,000	1,980 1,425 1,900 1,425	June August March March	Mar. '58 December SeptOct. September	Canadian Locomotive General Electric Electro-Motive Electro-Motive Flectro-Motive
	20 10 10 20 30 55 55 15 13 28 10 10 50 19 40 40 40 40 40 40 40 40 40 40 40 40 40	Amonge- Men	Arange- ment Service  20 B-B RdSw. 10 B-B RdSw. 10 B-B Switching 20 B-B Freight 30 B-B Freight 5 B-B RdSw. 15 B-B Switching 10 B-B General 10 B-B General 10 B-B Switching 11 B-B General 11 B-B General 12 B-B Switching 13 S-B Switching 140* B-B Switching 15 Switching 15 B-B Switching 16 B-B Switching 17 Switching 18 B-B Switching 18 B-B Switching 19 Switching 19 Switching 10 B-B RdSw. 11 Switching 11 Switching 12 Switching 13 Switching 140* B-B Switching 15 Switching 16 B-B Freight 17 Switching 18 Switching 19 Switching 19 Switching 10 Switching 10 Switching 11 Switching 11 Switching 11 Switching 12 Switching 13 Switching 14 Switching 15 RdSw. 16 B-B Freight 16 Switching 17 Freight 18 Switching 18 Switching 19 Switching 10 Switching 10 Switching 11 Switching 11 Switching 11 Switching 12 Switching 13 Switching 14 Switching 15 Switching 16 Switching 16 Switching 17 Switching 18 Switching 18 Switching 18 Switching 19 Switching 10 Switching 10 Switching 10 Switching 10 Switching 10 Switching 11 Switching 11 Switching 11 Switching 11 Switching 12 Switching 13 Switching 14 Switching 15 Switching 16 Switching 16 Switching 16 Switching 17 Switching 18 Switching 18 Switching 18 Switching 19 Switching 10 Swit	Arrange- ment Service Lb.  20 B-B RdSw. 240,000 10 B-B Switching 240,000 20 B-B Freight 947,000 5 B-B RdSw. 948,000 5 B-B RdSw. 948,000 5 B-B RdSw. 948,000 15 B-B RdSw. 948,000 15 B-B RdSw. 948,000 15 B-B Switching 249,000 16 B-B General 249,000 17 B-B General 249,000 18 B-B Switching 949,000 19 B-B Switching 949,000 10 B-B Switching 949,000 10 B-B Switching 949,000 10 B-B Switching 949,000 10 B-B Switching 949,000 11 B-B General 949,000 12 B-B Switching 949,000 13 B-B Switching 949,000 15 B-B Switching 949,000 16 B-B Freight 940,000 17 B-B Switching 949,000 18 B-B Switching 949,000 19 B-B Switching 949,000 10 B-B Freight 940,000 10 B-B Freight 940,000 11 B-B RdSw. 941,200 12 C-C RdSw. 175,500 13 B-B Freight 940,000 14 2-6-0 Industrial 32,000 15 C-C RdSw. 175,500 16 C-C RdSw. 175,500 17 B-B Fri-Pass. 160,000 18 B-B Fri-Pass. 160,000 19 B-B Fri-Pass. 160,000 10 B-B Fri-Pass. 150,000 11 B-B RdSw. 175,500 12 C-C RdSw. 175,500 13 B-B Fri-Pass. 160,000 14 B-B RdSw. 154,500 15 C-C RdSw. 175,500 16 B-B RdSw. 154,500 17 B-B RdSw. 154,500 18 B-B RdSw. 154,500 18 B-B RdSw. 154,500 18 B-B RdSw. 154,500 18 B-B RdSw. 154,500 19 B-B RdSw. 154,500 19 B-B RdSw. 154,500 10 B-B RdSw. 154,500	Arange- Meint Service Weight Horse- Lb. Power Down Meint Service Lb. Phose- power Down Meint Service Lb. Phose- power Down Meint Service Lb. Phose- Down Meint Mei	Amange	Arrange   No.   ment

- :: Leased. All locomotives diesel-electrics unless otherwise noted Diesel-hydraulic. Gas turbine-electric. Not reported in last year's annual issue.

#### 1957 PASSENGER CAR ORDERS

Purchaser	No.	Туре	Le Ft.	ngth In.	Construction	Seating Capacity	Weight	Order	Date of Delivery	Builder
Atchison, Topeka & Santa Fe	15	Baggage ,	85	0	Stainless	0	94,800	Feb.	Oct.	Budd
Baltimore & Ohio	2	Siesta Coach	85	0	Stainless	40	136,700	June	Feb. '58	Budd
Canadian National	22	Steam Generator	41	10	Steel Frame	4.4		Feb.	Jan. '58	Canadian Car
	27	Steam Generator	41	10	Steel Frame			May	Jan. '58	Canadian Car
	1	RDC-1	85	0	Stainless	90	114,100	May	June	Budd
	2	RDC-3	85	0	Stainless	49	119,400	May	June	Budd
	1	RDC-3	85	0	Stainless	49	119,400	June	luly	Budd
	1	RDC-2	85	0	Stainless	71	115,400	June	July	Budd
	BO	Baggage	73	6	Steel			luly	2nd atr. '58	National Steel

(Continued on page 118)



YOU'RE PROTECTED FOR 12 CENTS AN HOUR\*

\*Based on 4 years amortization. Estimate of installation included.

NOW ...

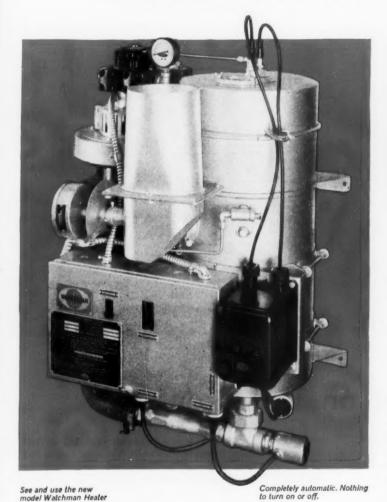
### AUTOMATIC DETECTION OF BROKEN FLANGES!

Called a Wheel Checker, this automatic detector consists of a series of steel fingers placed at right angles to the rail. A normal moving wheel depresses the fingers—but a broken flange will not! Result: a relay drops out, controlling an alarm and motorpump—bright yellow non-drying paint is shot on the passing wheels and you spot the defective wheel easily. The Wheel Checker, only one of its kind anywhere, has been successfully detecting broken flanges since 1952. Get detailed information today. Write:

1333 SOUTH FRANKLIN ST. - DENVER 10, COLORADO

Railroading's Outstanding Equipment Investment:

# RETURNS 50% OF ITS INSTALLED COST IN CASH SAVINGS EVERY YEAR







# SAVES \$1000 A YEAR IN FUEL COSTS ALONE

- Tests on several leading railroads have proven conclusively that the Watchman Heater pays for itself in two years—from then on represents a complete savings of over \$1000 per unit per year.
- Keeps diesel at safe minimum 140°F., ready-togo operating temperature automatically. Burns average of 2 pints of diesel fuel per hour (compared to 3½ gallons per hour for idling).
- Eliminates warm-up wear on metal parts, reduces sludge formation. Gaskets give longer service. Less engine maintenance and longer life are plus savings features.

#### VAPOR HEATING CORPORATION

80 East Jackson Boulevard, Chicago, Illinois

Offices in principal cities

			Ler	gth		Seating			Date of	
Purchaser	No.	Typa	Ft.	In.	Construction	Capacity	Weight	Ordered	Delivery	Buil dar
	1	RDC-1	85	0	Stainless	90	114,000	June	1st atr '58	Canadian Ca
	3	RDC-9	85	0	Stainless	70	115,000	lune	1st gtr '58	Canadian Car
	1	RDC-3	85	0	Stainless	50	119,000	lune	2nd atr '58	Canadian Car
Canadian Pacific	1	RDC-1	85		Steel	90	119,300	June	lune	Budd
	6	RDC-9	85	0	Steel	68	119,800	Mar.	Dec.	Canadian Car
Chicago & North Western	10	Dbl. Deck Coach	85 85 85 85	0	Steel	68 96	129,000	Oct.	Sept. '58	Pullman-Standard
	1	D. D. Parlor.	85	0	Steel	60	129,000	Oct.	Sept. '58	Pullman-Standard
	1	D. D. Coach-Parlor	85	0	Steel	60 78	129,000	Oct.	Sept. '58	Pullman-Standard
	1	D. D. Coach-Bar	85	0	Steel	80	129,000	Oct.	Sept. '58	Pullman-Standard
Chicago, Burlington & Quincy	1	Diner	85 85 85	5	Stainless	48	153,300	April	Jan. '58	Budd
	10	Gallery Coaches	85	o	Stainless	148	133,300	Mar.	Oct.	Budd
Chicago, Rock Island & Pacific	1	Talgo Coach	109	3	Steel-Alum.	80	91,860	May	Sept.	ACF
Hudson & Manhattan	20	Rapid Transit	51	Õ	Steel	100	59,000	January	Sept. '58	St. Louis Car
Minneapolis, St. Paul & Sault	20	Napio Iranar	21	~	01001	100	37,000	James		
Ste. Marie	1	Business Car Shell	85	0	Alloy Steel		82,700	Jan.	Sept.	Pullman-Standard
Northern Pacific	1	Dome Coach	89	6	Stainless	70	144,200	July	December	Budd
	1	Dome Sleeper	82 82	6	Stainless	40	153,900	July	December	Budd
	6	Diner	89	6	Stainless	48	144,900	July	Jan. '58	Budd
	10	Baggage	73		Alloy Steel		100,000	Nov.	May '58	Pullman Standard
Pennsylvania	6	M-U Coaches	82 73 85	10	Steel	128	90,000	Jan.	June '58	Budd
	30	Rapid Transit	51	0	Steel	100	59,000	Jan.	Sept. '58	St. Louis Car
Southern	6	Coach Shell	85	ŏ	Alloy Steel		86,400	lune	Oct.	Pullman-Standard
Union Pacific	5	Dome Coach	85 85	0	Steel	60	152,600	June	2nd atr '58	Pullman-Standard
Wabash	1	Dome Coach	85	0	Alum, Allo		152,600	lune	June '58	Pullman-Standard

### Q LOCOMOTIVE OWNERSHIP

Passenger Freight Freight Passenger Switch	12 Mo. 1955 744 3,838 335 1,029	Nov. 1, 1956 377 2,556 228 718	Nov. 1, 1957 264 1,797 162 474
Total	5,946	3,879	2,697
DIESEL-ELECTRIC	LOCOMOTIVE 12 Mo. 1955	UNITS Nov. 1, 1956	Nov. 1, 1957
Passenger Freight Multiple Purpose Switch	2,048 8,325 7,166 7,385	2,059 8,266 8,199 7,482	2,053 8,364 9,095 7,596
Total	24.924	26,006	27,108

### R MOTIVE POWER

	10 Months Ende with October		
FREIGHT SERVICE	1957	1956	
Road locomotive-miles (000) (M-211): Total, steam Total, diesel-electric Total, electric Total, locomotive-miles Gross ton-miles (excluding locomotive and tender)	20,692 368,293 6,943 398,237 1,186,296 376,700	39,479 371,673 7,300 420,964 1,216,838 396,527	

#### MOTIVE POWER STATISTICS (cont.)

		ths Ended eptember
PASSENGER SERVICE	1957	1956
Road motive-power miles (000) (M-213): Steam Diesel-electric Electric	2,782 175,556 10,348 188,689	6,861 182,766 11,246 200,874
YARD SERVICE		
Freight yard switching locomotive-hours (000) (M-215): Steam, coal-burning Diesel-electric Total	1,374 33,977 35,422	2,088 33,999 36,397

### S 1957 RAILWAY

	1957	Railway	Purchases*	(000)	
					\$ 500,000
					94,000
Crossties				**************	74,000
Other material		*******		*************	1,190,000
Total from manufacture	ers .	******			1,858,00
Fuel		******			410,000
Grand Total					\$2,268,000
*Subject to revision. **Value of orders.					

## '57 Projects-A Bet on Tomorrow

"By their deeds ye shall know them." And the best insight to railroad management thinking may well be via the industry's construction project "deeds". That's one reason Railway Age polled 440 North American railroads on projects costing over \$1 million.

Broad conclusions that may be drawn from the poll results are that railroad management is still betting on the industry future. It's supporting its wagers with big investments in yards, bridges, trackwork and CTC to eliminate traffic bottlenecks.

Information received shows that more large construction projects—involving more money—were underway last year than in 1956. In 1957, 135 projects totaling \$671.7 million in expenditures were reported, compared with 118 projects costing \$634.5 million in 1956.

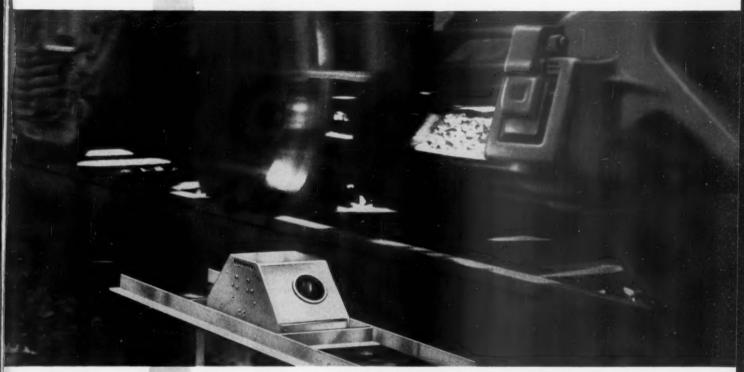
Out in front again—both costwise and in number of jobs is the effort to improve existing yards and build new ones. Such projects represented 31 per cent of all reported construction, seven being completed at a cost somewhat over \$42 million.

The Frisco's new layout at Capleville, Tenn., is outstanding among these. Starts were made on three others, the largest being the Canadian National's \$28.5 million yard at Cote de Liesse, near Montreal.

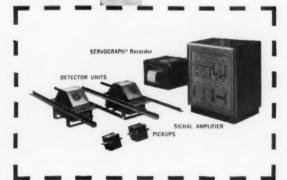
Bridge construction expenditures took second place last year, accounting for 14 per cent of the funds reported for new projects. Top bridge jobs completed in 1957 included work on the C&O's viaduct at Richmond, Va.; rebuilding of the New Haven span at Bridgeport, Conn.; the Reading's replacement of its Schuylkill river bridge at Reading, Pa.; and the Oregon Trunk's conversion of its Celilo bridge over the Columbia river.

Grade crossing eliminations ranked third with 12 per cent of the money reported. Seven of these projects were finished in 1957. Most outstanding was the New York Central's \$9.7 million elevation over the Inner Belt Expressway in Cleveland. (Continued on page 120)

# "RED BOARD" on the HOT BOX PROBLEM!



Servosafe\* Hot Box Detective\* Spots Every Hot-Running Journal



SERVO E

"Hot Boxes"—among the oldest problems in railroading, are under control. On the lines where Servo Corporation's Hot Box Detective is on the job, delays and damage from overheated journals disappear.

The SERVOGRAPH\* recording unit, located in the control tower, ticks out the written record on the condition of every journal in the passing train, with a clear and unmistakable warning when an overheated journal passes. The potential hot box is pin-pointed to the exact journal of the specific car. Long before its condition reaches the danger point, the journal can be repacked or cooled, or the car set out, with minimum delay.

The actual hot box hunting is performed by the Servotherm infrared detector heads located at trackside below the axle level. Operating without attention, these detector units scan all the journals of every car passing—day or night, in any weather at speeds from 10 to 60 mph. The IR detectors pick up the warning signal (that is always present and proportionate with heat) and flash the report on each journal instantaneously to the remote recording unit (usually in the control tower) that is located up to four miles away.

Now in service on 7 roads, Servo Corporation's Hot Box Detectives have proved their value in ending the hot box problem... additional installations are now on order including those from two new roads.

Get the complete story on the Servosafe Hot Box Detective now ...find out how it will pay off for your road. Call, wire, or write for our railway applications engineer to give you full details. And if you've not received the new Hot Box Detective brochure, write for your free copy. Please address:

#### SERVO CORPORATION OF AMERICA

20-20 Jericho Turnpike

New Hyde Park, L. I., N. Y.

(Continued from page 118)

Of all projects under way in 1957, the most costly was the CNR's \$40.25 million Beattyville-Chibougamau-St. Felicien branch construction.

Brief descriptions of 1957 projects costing more than \$1

million follow. Those not more than 25 per cent completed by year's end are listed first.

They are followed by projects that were more than a quarter finished. Figures in parentheses indicate percentage of completion.

#### **Projects in Early Stages**

Baltimore & Ohio: New bridge over Arthur Kill, New York, \$11,000,000 (15); Dents Run spur, Mannington, W. Va., \$1,500,000 (25); Madison road—Marburg avenue grade crossing elimination, Cincinnati, \$1,900,000 (15).

**Boston & Maine:** New coal-handling facilities, Mt. Tom (Holyoke), Mass., \$1,200,000 (15).

Canadian National: Main tracks relocation, Turcot West-Dorval, Que., \$4,900,000 (10); marshalling yard, Cote de Liesse, Que., \$28,500,000 (10); new yard, Riviere des Prairies, Que., \$1,074,000 (2); diesel maintenance shop and heating plant in yard, Cote de Liesse, \$3,700,000 (10); car-shop buildings, new trackage and power distribution system, Montreal, Que., \$4,105,000 (10); spur to serve Caland Ore Company, Atikokan, Ont., \$2,315,000 (5); new diesel shop, shop equipment and trackage, Calder, Alta., \$3,185,000 (5).

Canadian Pacific: Relining spiral tunnels, Field, B.C., \$2,000,000 (24); new office building at Henry and Lilly streets, Winnipeg, Man., \$1,500,000 (15).

Chicago & North Western: New subway at Lincoln avenue and Addison street, Chicago, \$1,200,000 (10); and main track relocation, Negaunee, Mich., \$2,000,000 (10).

Chicago, Rock Island & Pacific: Relocating 10.8 miles of main track, Amarillo, Tex., \$1,200,000 (5).

Delaware & Hudson: New yard, new diesel locomotive servicing facilities, new passenger and freight station, and 10 grade separation structures, relocation of approximately 10 miles of the Saratoga-Champlain division main line, with CTC control, from within the city of Saratoga Springs, N.Y., to a new alinement on the west side of the city, \$9,000,000 (8).

**Jersey Central Lines:** Grade crossing elimination, Port Reading, N.J., \$1,985,-682 (10).

Louisville & Nashville: Centralized traffic control system between Anchorage, Ky., and Latonia, Ky., with the control machine located at Latonia, \$2,692,641 (10).

New York Central: Year-round, airconditioning system with central watercooling plant in main office building, New York, \$4,481,445 (5); rehabilitation of draw bridge carrying main line over the Little Calumet river, Calumet Park. Ill., \$2,250,000 (10); underpass carrying Edsel Ford Expressway under the tracks of the Detroit Belt Line, Detroit, Mich., \$1,900,000 (5); traffic control system and single-tracking between Boston, Mass., and Albany, N.Y., \$5,800,000 (15).

Norfolk & Western: Five passing track sidings between Bluefield, Va., and Norton, Va., extended to accommodate 200-car trains and install modified traffic control, and extension of traffic control, Caretta Branch Junction to Cedar Bluff, Va., \$1,050,000 (25); 6.3-mile extension to the recently completed Wilder spur on Clinch Valley district, including an 8,240-ft tunnel, with 8 miles of operating tracks to serve additional coal-mining operations, Wilder spur, Va., \$5,592,000 (20).

Pennsylvania: Grade crossing elimination by an undergrade bridge, Metuchen, N.J., (5); abandon one main track between Rockville, Pa., and Emporium, and construction of centralized traffic control (25), and additional classification and departure yard at Wheelock, Ohio (20).

**Quebec, North Shore & Labrador:** New ore car repair area, Seven Islands, Que., \$1,400,000 (10).

St. Louis Southwestern: Gravity switching yard at Pine Bluff, Ark., \$5,581,290 (10).

**Texas & New Orleans:** Wood-preserving plant using vapor-drying method, Houston, Tex., \$1,500,000 (16).

Union Pacific: Installing 228.7 miles of CTC, including Boise main line and 19.3 miles of the double track between Glenn's Ferry and Reverse, Ida., with reverse operation, extending or retiring sidings, installing No. 14 turnouts to replace No. 10 turnouts, and rearranging trackage at 26 locations, \$3,017,185 (15); constructing 7,415 ft of additional track, an enclosed freighthouse, a block office, a two-story air-conditioned office building, an open platform, paving, parking area, mechanical and conveyor equipment, and 6,000-ft pneumatic-tube system to the yard office at East Los Angeles, Cal., \$2,946,484 (7).

Virginian: Traffic control system between Princeton and Elmore, W. Va., \$1,330,000 (25).

**Wabash:** Modern freight terminal at 47th street, Chicago, \$4,250,000 (25); New bridge over the Illinois river, Valley City, Ill., \$3,250,000 (20).

#### Jobs Completed or Well Underway in 1957

Alaska: New terminal yard, \$1,052,289 (100) and new marine terminal at Seward, Alaska, \$6,000,000 (85).

Atchison, Topeka & Santa Fe: New freighthouses at Corwith, Chicago, (100); Corwith yard improvements, Chicago (60); line change between Craig and Olathe, Kan. (100); CTC system and additional tracks between Fresno, Cal., and Mormon (100).

Baltimore & Ohio: Changes account of Penn-Lincoln parkway, Pittsburgh, \$4,-000,000 (90); bridge over the Cuyahoga river, Cleveland, \$3,250,000 (100); 23rd street freight terminal, New York, \$1,900,000 (95); yard and terminal facilities, Cumberland, Md., \$13,000,000 (40) grade crossing elimination, Dayton, Ghio, \$5,-700,000 (100); Locust Point Fruit Terminal, Baltimore, \$4,300,000 (30).

**Boston & Maine:** New service building for Budd cars, Somerville, Mass., \$1,000,000 (100).

Canadian National: Yards at Garneau, Que., \$1,050,000 (100), Joffre, Que., \$2,783,000 (85), and Sarnia, Ont., \$2,902,000 (90); freight terminal facilities, Montreal, \$6,710,000 (100); yard changes and enlargement at Mimico, Ont., \$4,183,000 (100); new station facilities and trackage required for hotel erection, Montreal, \$6,708,000 (60); express garage and office building, Toronto, \$4,750,000 (85); combined grit blast plant and freight car shop, Transcona, Man., \$1,082,000 (50); A.P.B. signaling, Blue River to Kamloops Jct., B.C., \$1,194,000 (100); centralized traffic control system at the west end of the terminal, Winnipeg, Man., \$1,276,000 (50); and at the east end, \$1,370,000 (97); terminal yard, Battle Creek, Mich., \$4,097,000 (90); Torrey yard, Flint, Mich., \$2,462,000 (60); centralized traffic control between Durand, Mich., and Port Huron, \$1,084,000 (90); branch lines between Terrace, B.C., and Kitimat, \$11,500,000 (100), between Hillsport, Ont., and Manitouwadge, \$2,595,000 (100), between Beattibog, N.B., and Heath Steele Mines, \$2,800,000 (100).

Canadian Pacific: Station track and interlocking plant revision and modernization of Calgary, Alta., station \$5,000,000 (45); pier repairs, steel span replacement and placing of scour arrestors, large bridge, Mission subdivision, \$1,850,000 (95); new spur line, 21.4 miles long, south from Brocket, Alta., \$1,630,000 (100).

Chesapeake & Ohio: Low-level pier with ore-handling equipment and supporting yard tracks, Newport News, Va., \$8,307,500 (100); replacement of steel spans in portion of viaduct west of Rivanna Jct., Richmond, Va., \$1,138,000 (100); replacement of steel span in the viaduct east of Rivanna Jct., Richmond, \$7,049,000 (45); line changes at 29 points and respacing signals on the Rivanna subdivision, \$1,143,000 (98); 23.3 miles of

# INSIDE STORY

of the economical answer to the

HOT BOX PROBLEM



The Big Question: Could a permanent journal bearing conversion package be created that would require little modification and maintenance, cost less to buy and install . . . and tend hot boxes?



Railroaders discussed an idea. It interested a prominent railroad which promptly put its top designers to work on it.



Bearing maker was called in to apply its experience and engineering resources to further development of the idea.



RESULT!
the CLEVITE
Sealed Sleeve
Bearing Cartridge

journal bearing conversion for freight cars

# Less Modification . . . Lower installing costs!

Modification is simple. Remove waste retainer ribs and dust guard pocket. Machine journals and collars to AAR dimensions with a practical tolerance (.002-.005 in.).

Installation requires little time and only a few standard tools. Low

cost renewal of all working parts.

Successfully tested, duplicating extremes of service to the equivalent of 12 years hard operation. In 2 years of road service, Clevite Cartridges are performing perfectly—and tests are continuing.

Get complete data now on features and performance of the Clevite Cartridge . . . the permanent, soundly engineered answer to your "hot box" problem.

Test it on your road!

CLEVITE MAKES IT! Using the precision methods of Cleveland Graphite Bronze Company Division of Clevite Corporation, Cleveland 10, Ohio

STANDARD CAR TRÚCK

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Ask for a representative to call and discuss your requirements.

STANDARD CAR TRUCK COMPANY 332 So. Michigan Ave., Chicago 4, Winele

IN CANADA: CONSOLIDATED EQUIPMENT COMPARY, LTD., MONTREAL 2, QUEDEC

centralized traffic control system between Macdougal and Chelyan, W. Va., \$1,209,000 (100); reconstruction of westbound manifest yard at Russell, Ky., \$5,463,300 (95); improved facilities in the fabrication and car shops and modernized reclamation shop at Russell, \$2,171,400 (100).

Chicago & North Western: Bridge reconstruction over Ridge avenue and Emerson street, Evanston, Ill., \$1,100,000 (95); new car shop and other facilities at Clinton, Iowa, \$4,000,000 (90).

Chicago, Burlington & Quincy: Line changes and CTC between Hannibal, Mo., and Macon, \$1,550,000 (95); new freighthouse, Berwyn, Ill., \$2,600,000 (50).

Chicago, Rock Island & Pacific: New 10.79-mile line between Winterset, Iowa, and Earlham, retiring 24.14 miles of track, \$1,108,000 (50).

**Duluth, Missabe & Iron Range:** Improved tracks and other facilities at Stephens mine, Aurora, Minn., \$1,500,-000 (100).

Erie: New freight car repair shop facilities, Meadville, Pa. (85).

Galveston Wharves: Reinforced concrete unloading pier and warehouse, Galveston, Tex., \$2,225,000 (45); bulk-handling pier with steel sheet-pile bulkhead and gantry crane, Galveston, Tex., \$1,987,000 (50).

Great Northern: Line change, Edmonds Wash., \$1,277,000 (90).

Indianapolis Union: Grade separation, Indianapolis, \$3,300,000 (80).

Long Island: Three grade crossing eliminations, new road and station with associated facilities, Baldwin, N.Y., \$4,-200,000 (99).

Louisville & Nashville: Modern humpretarder yard with allied facilities at Boyles yard, Birmingham, \$8,600,000 (65); modern hump-retarder yard with light car-repair and diesel servicing facilities at Hills Park yard, Atlanta, \$9,500,000 (98).

Missouri Pacific: Main track relocation between Dinero, Tex., and Mathis, account of construction of the Wesley Seale dam and reservoir, \$1,525,000 (100); alterations to main track across Madison to the Marianna levee and track elevation over the proposed levee, Marianna, Ark., \$1,251,500 (75); main track relocation account of construction of the Toronto reservoir, Toronto, Kan., \$1,397,230 (100); double hump-retarder yard at East Bottoms, Kansas City, Mo., \$3,239,800 (30).

New York Central: Grade crossing elimination at Cedar street, Jackson street, Evans street, and Walnut street, Batavia, N.Y., \$12,900,000 (95); electronic yard, Buffalo, N.Y., \$10,600,000

(100); bridge over Harlem river, New York, \$21,400,000 (99); Cuyahoga river bridge reconstruction, Cleveland, \$5,000,-000 (95); underpass carrying lake front tracks over the East Inner Belt Expressway, Cleveland, \$1,750,000 (30); underpass grade separation at Center street. Fostoria, Ohio, \$1,500,000 (100); spur track and yard facilities for the Ford Motor Company, Brownhelm, Ohio, \$1,007,000 (94); new freight yard and supporting facilities, including CTC, Elk-hart, Ind., \$21,600,000 (75); yard changes and alterations to buildings and other facilities account of the proposed construction of the Calumet Skyway bridge, Chicago, \$1,200,000 (95); underpass grade separation Ashland avenue at 40th street, Chicago, \$2,500,000 (65); overpass at Torrence avenue, Burnham, Ill., \$2,-500,000 (50); grade separation underpass at Saginaw street, Lansing, Mich., \$1,300,-000 (100); underpass grade separation over First street, Dayton, Ohio, \$6,000,-000 (100); two underpass grade separations, Columbus, Ohio, \$3,600,000 (100) two underpass grade separations at Brook-park and Smith roads, Cleveland, \$2,300,-000 (60); central viaduct over Inner Belt Express way, Cleveland, \$9,700,000 (100); underpass at Hudson street, Columbus, \$1,250,000 (40); and overpass at Mound street, Columbus, \$2,700,000 (100).

New York, New Haven & Hartford: Reconstruction of four-track viaduct, Bridgeport, Conn., \$2,500,000 (100).

Norfolk & Portsmouth Belt Line: Vertical-lift bridge across the southern branch of the Elizabeth river, at Norfolk, Va., to replace the existing swing bridge constructed in 1898, \$2,520,000 (30).

Norfolk & Western: Construction of a new freight car shop at Roanoke, Va., \$2,820,000 (89).

Northern Pacific: Five-track diesel locomotive shop, including fueling, sanding and washing facilities, Livingston, Mont., \$1,000,000 (100).

Pennsylvania: New ticket sales and service facilities at Pennsylvania station, New York (100); construction of additional yard and enginehouse facilities to permit the abandonment of the East Trenton enginehouse, Morrisville, Pa., (95); spur track in yard to serve the Chrysler stamping plant, Twinsburg, Ohio (100); vertical-lift bridge over the Cuyahoga river, Cleveland (75); passenger terminal improvements, Pittsburgh, Pa. (85); yard developments at Conway, Pa., (89); extension of the River branch to Buck Hill, Powhatan, Ohio (82).

Reading: Modernized yard facilities, Reading, Pa., \$1,500,000 (100); bridge over Schuylkill river, Reading, Pa., \$1,525,500 (100); three gantry cranes at Pier G, Philadelphia, \$1,240,000 (100).

St. Louis-San Francisco: New hump yard, Capleville, Tenn., \$9,500,000 (100); hump yard and revamped facilities, West Tulsa, Okla., \$5,500,000 (35); enlarge-

ment of the 19th Street yard, Kansas City, \$1,000,000 (70).

Seaboard Air Line: New freight station facilities and new division offices building, Jacksonville, Fla., \$1,175,000 (100); additional yard and other track facilities for handling increased production from rock mining operations, Brooksville, Fla., \$1,200,000 (100); 17.5 miles of main line and other tracks to serve the Lehigh Portland Cement Company and the General Portland Cement Company, Miami, Fla., \$1,370,000 (100).

Southern: Extension of Inman freight yard, Atlanta, \$15,000,000 (85); freight-car repair shops, Hayne, S. C., \$1,500,000 (100); removed second main track and installed centralized traffic control from Greenville, Tenn., to Armour, \$4,000,000 (100); yard extension and new connecting track at Citico yard, Chattanooga, \$13,800,000 (100); automated-production wheel shop at Coster shops, Knoxville, \$1,450,000 (50).

Southern Pacific: Completed the first and second phases of a new gravity yard at Eugene, Ore., \$2,335,095 (100); construction of permanent railroad roadbed across Great Salt Lake, consisting of a 13.8-mile rock fill or embankment connecting with existing fills, a single track railroad with CTC to be built across this embankment, \$48,939,700 (35).

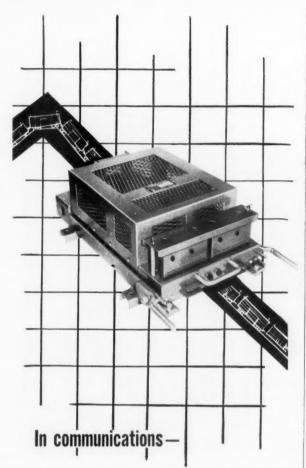
**Oregon Trunk:** Converted a through pinconnected truss to a lift span and raised girder approach spans 5 ft, Celilo bridge, \$1,842,600 (100).

Union Pacific: Five- story addition to the general headquarters building for IBM equipment and additional office space, Omaha, \$1,090,322 (30); add to right of way, relocate tracks, new freighthouse, two-story office building, tube system, diesel shop with air, steam and water lines, and a platform with gantry cranes, Kansas City, Kan., \$4,897,000 (30); 264.5 miles of centralized traffic control, extend and retire sidings, acquisition of right of way for 10.25-mile line change between Granger, Wyo., and Pocatello, Ida., \$7,525,711 (100); exchanged 204 acres of land with the United States government in line change between Cobb, Ida., and Huntington, Ore., \$2,612,200 (100); to acquire 22 acres of additional right of way, construct and relocate trackage, install three 150-ton track scales and construct new freighthouse, office building, garage and platform, Albina, Ore., \$6,110,750 (25).

Virginian: Make alterations and improvements to coal pier No. 2, Sewells Point, Va., \$2,850,000 (65).

Western Maryland: Make pier additions and improvements at the McComas street terminal, Port Covington, Md., \$4,250,000 (100).

Western Pacific: Replaced timber lining with concrete lining in four main line tunnels between Niles, Cal., and Palisade, Nev., \$1,085,000 (100).



# Only <u>independent</u> AC power will keep your costs down

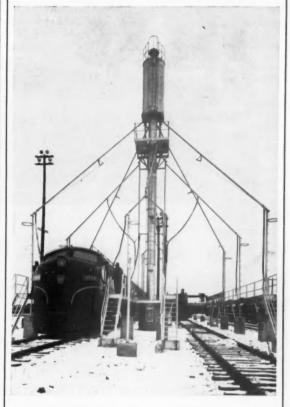
Here's why: Communications equipment designed to operate from 110 volts AC is less complicated, more economical, far easier to service, and lower in first cost. Identical equipment can be used throughout the system, with resultant reduction in parts inventory. Cornell-Dubilier Inverters will operate this equipment from any standard battery source ... and run it at top efficiency, day after day. For complete technical data on economical conversion from 12V., 32V., 64V., and 120V. D-C to 110V. A-C, or for engineering consultation, write to Cornell-Dubilier Electric Corporation, Dept.R-18, 2900 Columbia Ave., Indianapolis, Ind.

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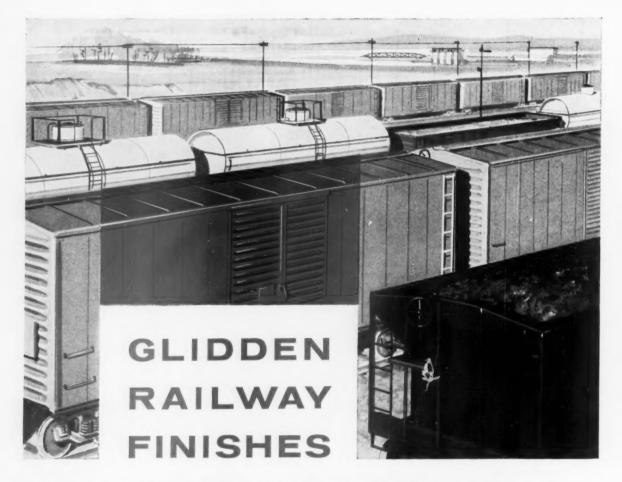
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he also pointed out that American shippers must pay the tax while their Canadian competitors escape the levy. He emphasized, too, that large industries may avoid the tax by operating their own private transportation facilities.

The NP president also reminded the subcommittee that outdated state and federal legislation, enacted in the "horse and buggy days" of bygone rail monopolies, makes it impossible for railroad managements to adjust and adapt their operations to modern conditions. On that score he joined in the recommendations made by AAR President Loomis.

President DeButts of the Southern also gave high priority to his call for repeal of the transport taxes. He said they are causing a "wasting away" of railroad plant, and thus affecting adversely "an absolutely essential part of our national defense"

The Southern's president proceeded to call for more rate-making freedom and

arrangements for a construction reserve along lines of the Loomis proposals. He referred also to what he considers the competitive disadvantage suffered by the railroads from the cost to them of the railroad retirement and railroad unemployment insurance systems.

This cost, he pointed out, "far exceeds" costs of the general social security system by which most railroad competitors are covered. "Proposed increases in the burdens under railroad retirement, unemployment and sickness coverage," Mr. DeButts added, "would have further adverse effects upon the railroads' financial stability."

Mr. DeButts also called attention to reports that Russia "is improving its railroads as fast as its resources will permit." And he said: "We must keep ahead here as elsewhere for the need for an efficient transportation system functioning at the beginning of war is more important now than ever before."

President Perlman of NYC devoted most

of his presentation to ways of curing the deficit from passenger-train operations. The railroads, he said, should be freed to work their own way out of that problem by being allowed to apply sound business principles to their passenger services.

Mr. Perlman had alternative proposals for making the passenger business economically sound. He said that neither of them would require subsidy or government financial support. The proposals are:

1. Remove all regulation in the pricing and operation of passenger service trains.

2. If regulation is to be continued, give the federal government, through the ICC, rather than individual state commissions, final regulation of all passenger service... This could be done through a simple amendment to the Interstate Commerce Act, giving the ICC the power and duty to provide that the railroads be permitted to earn their full costs plus a fair return on any passenger service, or that they be given the right to discontinue that service. (Continued on page 127)

### Railroading



#### After Hours with



SHORTER TRAINS OFTENER?—I heard a railroad president say recently that he'd be

say recently that he'd be glad to run 50-car freight trains—if union rules would let him do the job with 3 men instead of 5 or 6. No jobs would be lost by smaller crews on shorter trains, and customers would get better service, thus building traffic and making jobs more secure.

On the question of shorter trains, Gerd Wurfel of Duisberg, West Germany, writes that they're running regular freight trains over there of 1200-1500 tons with steam power. They'll go up to 3000 (metric) tons with diesels or electric locomotives, but that's their top.

In passenger service, their post-war coaches weigh from 30 to 34 metric tons, seat 66 passengers. Mr. Wurfel suggests that U.S. railroaders might find more of helpful interest to them on the West German railways than on those of France—because German traffic is decentralized, like that of the U.S. The French railways, he believes, are a special case because of the heavy traffic concentration upon Paris.

MISCHIEF IN SPECIALIZATION?—I usually buy a few books as presents around the holidays. As a result of such shopping around, I often wind up by acquiring an armful of printed matter for myself. One book I picked up in this way has hit me pretty hard. It's called "The Tower and the Abyss" and the author is a Cornell professor named Erich Kahler.

The theme of the book is that specialization in production—division of labor—is not an unmixed blessing; that it has turned loose a lot of evil in the world, as well as good. Without specialization, we'd all be as poor as Chinese peasants—but the handsome rose of efficient production has some thorns.

Take those doctors and scientists who performed the gory experiments on human guinea pigs at Nazi concentration camps. Were these fellows demons in human form? Not at all, says Mr. Kahler. They were just devotees to specialization. Their job as loyal Germans was to obey orders—not to speculate on the morality of what they were told to do. As scientists, their

job was to get the answers to problems that experiments on human subjects would solve. The author believes the Nazi scientists suffered from a disease from which none of us is immune—willingness to do our specialized jobs thoroughly, without weighing the ultimate consequences. And he believes civilization is acutely imperilled by behavior that is increasingly unmindful of long-run results.

I suspect the disease that Mr. Kahler diagnoses helps to explain most of the troubles from which the railroads suffer. I believe it also explains the St. Lawrence Seaway, our colossal federal highway-building program, the TVA, the union shop, and the dropping of the atom bomb on Hiroshima.

why sickness is costly—I knew I'd get a comeback on that note I made about high costs of hospitalization—and I did, from Henry S. Sturgis, life-long friend of the railroads and an Erie director. HSS has intimate knowledge of hospital operations. He says their costs have gone up primarily because of wage increases (which I can readily believe). This inflation is hard to offset by increased production per employee, because there's no mechanization. Inflation always hits personal-service organizations the hardest—because they can't offset rising labor costs by installing improved machinery. That's the principal reason why railroad passenger service is in so much trouble—no increase in passenger-miles per employee to offset increased wage costs.

AERIAL PICTURES—The Lackawanna's Harry Schmidt read in our issue of December 16 about the Milwaukee's use of aerial photography—and tells me of some pioneer uses the DL has made of this process. Over a decade ago all branches in suburban territory were photographed for a commutation study; and hundreds of oblique shots are available of plots for industrial development. When Hurricane Diane of unhappy memory hit the DL in '55, the whole afflicted area was promptly photographed from the air—a great timesaver in the rehabilitation job.

#### ANNOUNCING the NEW NOLAN Model SW RE-RAILER



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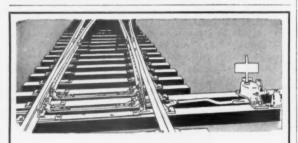
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(Continued from page 125)

The NYC president suggested an additional requirement that if any public body or group were willing to pay for continuance of a service as a matter of public convenience, on the basis of full cost plus a fair return, the ICC could order continuation of that service.

"In that way," Mr. Perlman said, "Losing services the people did not want enough to pay for would be dropped, and those that the public really required would

be continued."

If given freedom to solve the passengerdeficit problem itself, Mr. Perlman said the Central would do these things:

First, base prices for each service on the cost of producing the service plus the same reasonable return on investment other utilities receive.

Second, where the public declined to patronize its service at such compensatory prices, the railroad would be free to experiment, seeking new means of getting business, discontinuing rail service, or substituting other means of meeting the public's demand.

Third, any service that gave promise of being profitable would be promoted to the utmost, because the Central's continued existence as a private corporation is dependent solely on its ability to produce profits.

#### Canadian Rate Hike Is Suspended by Prime Minister

The 3.6% freight rate increase recently authorized for Canadian railways has been suspended until at least March 1.

Suspension action was taken by Canadian Prime Minister John Diefenbaker. He said the delay is designed to allow time to hear an appeal against the increase by eight provincial governments.

The increase had been called inadequate

by the Canadian Pacific and the Canadian National. Both said the increase precluded earning anything on the hundreds of millions of dollars they invested in plant and

equipment in the last decade.

Meanwhile, non-operating unions have protested the appointment of Judge Charles McTague as chairman of a Federal Conciliation Board. The board has been set up to adjudicate the \$128,000,000 wage dispute between railways and the non-ops.

Judge McTague, it was said, is a director of many large corporations. Hence, a union spokesman claimed, the judge is not an appropriate person to head a con-

ciliation board.

Railroad efforts to eliminate firemen from diesels in yard and freight service have encountered an unexpected delay. Judge R. L. Kellock, chairman of the board examining the question, is ill. This, said Labor Minister Michael Starr, will "considerably delay presentation of the board's report."

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#### Current Publications

#### PERIODICAL ARTICLES

THE LONG ISLAND COMES BACK, by William D. Middleton, Trains, December 1957, pp. 14-32. Kalm-bach Publishing Co., 1027 N. Seventh st., Milwaukee 3. Single copies, 50¢.

The story of the nation's busiest passenger railroad

RUSSIAN RAILWAY JOURNEY, by J. H. Price. Railway World, October, November and December, 1957 issues. The Railway World Limited, 245 Cricklewood Broadway, London, N.W.2. Single copies, 2 shillings.

Mr. Price gives an interesting account of his railway travels through Russia. In the October issue he describes his travels through Finland and across the Russian border to Leningrad. In the November issue he tells of his travels in Leningrad, including a trip on the "Little October," or Children's Pioneer Railway, where children aged 10 to 15 years can train for a railway career by running their own narrow-gage trains, usually steam. The December issue describes his railway journey from Leningrad to Moscow over the October Railway. Mr. Price took several railway pictures which are reproduced. The December issue includes a plan of the sleeping cars on USSR railways. The series of articles will continue in the January issue.

#### ANNUALS

ACCIDENT BULLETIN No. 125, Calendar Year 1956. 95 Pages. Interstate Commerce Commission, Bureau of Transport Economics and Statistics. Available from the Government Printing Office, Washington 25, D.C. 55€.

WOOD PRESERVATION STATISTICS, 1956. 34 pages, map, charts, graphs. Forest Service, U.S. Department of Agriculture, in cooperation with the American Wood-Preservers' Association.

Annual report presents data on wood preservation during 1956, in comparison to 1955 figures.

AUTOMOBILE FACTS AND FIGURES, 37th EDI-TION, 1957. 80 pages. Automobile Manufacturers Association, New Center bldg., Detroit 2. Free.

FACTS AND FIGURES ABOUT BRITISH RAILWAYS, 1957 EDITION. 49 pages. British Transport Commission, 222 Marylebone road, London, N.W. 1, Eng-

THE CENTRAL RAILWAY; SOME FACTS AND FIG-URES, 1956-57. 77 pages. Central Railway, Victoria Terminus, Bombay, India. Free.

AMERICAN TRUCKING TRENDS, 1957. 29 pages, charts, tables. American Trucking Associations, Inc., 1424 Sixteenth st., N.W., Washington 6, D.C. Free.

#### FROM THE MANUFACTURERS

METAL STITCHING. 16 pages, illustrations, charts, drawings. Available from Acme Steel Company, Dept. RA, 135th street and Perry avenue, Chicago 27, 111.

Acme Steel's new booklet gives detailed information on stitching metal to metal or

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PRECISION ENGINEERED. 16 pages, illustrations, tables, charts. Union Spring and Manufacturing Company, Dept. RA, New Kensington, Pa. Free.

A technical brochure on Belleville springs. In addition to showing various end uses for Belleville springs, it also gives formulae and data that design engineers will find useful. Designed primarily for original equipment manufacturers, it is of interest to plant maintenance, purchasing and production people.

GOODYEAR GRADE CROSSING PAD. 8 pages, illustrations. The Goodyear Tire & Rubber Company, Industrial Products Division, Dept. RA, Akron 16, Ohio, Free.

Lists six big advantages of these crossing pads, describes preparation of track for their use, and illustrates in 15 steps how they are installed. Drawings of a crossing with the pads are also included.

TESTING FACILITIES FOR RESEARCH AND DEVEL-OPMENT, 14 pages, illustrations. The Budd Company, Dept. RA, 2450 Hunting Park ave., Philadelphia 32 Free.

Describes the testing facilities for research and development involving metals and metal structures which are available at the Budd Company.

BOOKS

BUILDINGS FOR INDUSTRY, 309 pages, illustrations, drawings. F. W. Dodge Corp., 119 W. 40th st., New York 18, \$9,75.

To cut costs, to get closer to markets or material sources, to improve transportation facilities, to escape taxation, to allow better labor conditions, to simplify or unify operations, to house more modern, more efficient more automatic machinery—these are some of the goals behind a new industrial project.

In addition, it must provide for increased welfare, comfort, and efficiency of its workers, and be an attractive addition to the neighborhood in which it will operate. The industrial projects discussed in this book have been able to meet these seemingly contradictory challenges.

Material handling, color, electrical systems,

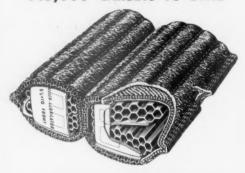
air conditioning and lighting are among the subjects covered in the section on indus-

trial building design.

The rest of the book analyzes in detail 74 examples of successful industrial architecture, and is organized into six categories: warehouses, light industry, consumer goods, manufacturing laboratories, utilities and service industries, and heavy industry. Photographs and line drawings illustrate each project and the text fully explores and explains choices of site, plan, lighting, colors, and the location of such plant components as washrooms, cafeterias, and parking lots. A locomotive maintenance shop, rail sidings, and traffic routing are among the projects dis-

# FOR PROGRESSIVE RAILROADING

145,000 CARSETS TO DATE



MILLER LUBRICATOR

# LUBRICATION RESULTS: 1954 vs. 1957 ON 600 LOG CARS

- Up to and including 1954 these were the

  MOST DIFFICULT cars on the railroad
  to lubricate.
- During 1955 and 1956 MILLER PADS were applied, bringing immediate improvement.
- DURING 1957, when COMPLETELY EQUIP-PED with MILLER PADS, THESE SAME CARS became the BEST OPERATING CARS on that Railroad. THE IMPROVE-MENT WAS 50-FOLD!
- 50 to 1 improvement by applying Miller lubricating pads at \$40 per carset.

LIFE EXPECTANCY—6 YEARS
10,000 CARSETS ALWAYS ON HAND

### MILLER LUBRICATOR CO.

Winona, Minnesota

In Canada: Napanee Iron Works, Napanee, Ont. and Montreal, Que.

# FORGED by PITTSBURGH





# FORGED by PITTSBURGH for ARC WELDING



This newly developed brake jaw was designed to permit arc welding of the brake jaw to the brake rod. No welding fixtures are necessary because the jaw holds the rod in the exact position while welding. Furthermore, the design was specifically tested to provide the proper amount of welded area. The strength of welds applied in the weld pockets will equal the strength of the maximum (11/8) diameter rod inserted.

Other features include the carefully designed side arm and eye which meet A.A.R. requirements. Incidently, all holes are drilled to customer specification. All these features combine to make this new forged brake jaw an attractive part for either maintenance or new equipment applications.

For additional information on other railroad forgings, request bulletin No. 5205, "Freight Car Forgings."

### PITTSBURGH FORGINGS COMPANY

CORAOPOLIS, PA.

# People in the News

CENTRAL OF GEORGIA.—O. J. Murry, assistant to president, Savannah, Ga., resigned December 31, 1957, to help form an advertising-public relations agency at Savannah, to be known as Whitson, Murry and Associates.

 S. Grohom, commercial agent, Atlanta, Ga., appointed division freight agent there. G. A. Wotson, assistant general freight agent, Atlanta, named general agent there and his former position abolished.

CHESAPEAKE & OHIO.—Churles W. Campbell, assistant freight traffic manager, Detroit, appointed freight traffic manager, Pittsburgh, Pa., effective January 1, succeeding W. E. Turner, whose election as vice-president traffic and industrial development, Richmond, Fredericksburg ? Potomac, Richmond, Va., was noted in Railway Age, Dec. 9, 1957, p. 56.

K. J. Cabill appointed auditor of expenditures, Northern region, Detroit, succeeding L. F. Grab-

wowski, promoted.

William R. Rhodes, assistant general passenger agent, Richmond, Va., appointed general passenger agent, New York. Ralph B. Goodman, assistant general passenger agent, New York, transferred to Richmond.

CHICAGO & NORTH WESTERN.—Horold A. Gundersen, general traffic manager, Chicago, promoted to the newly created position of assistant vice-president—rates and divisons. Paul W. Beutjer, assistant general freight agent-rates, appointed general freight agent-rates.

J. Robert Kunkel, assistant coal traffic manager, named to the newly created position of general coal traffic manager, Chicago.

Emil J. Mueller, assistant traffic manager-commerce, appointed general commerce agent, Chicago, to succeed Martin G. Gundersen, traffic manager-commerce, who retired January 1.

DULUTH, SOUTH SHORE & ATLANTIC.—R. J. Burry, general superintendent, Marquette, Mich., temporarily relieved of duties of that position so he may be assigned to special duties in the executive department. B. J. Pederson, assistant general superintendent, Marquette, appointed superintendent of transportation there.

ELGIN, JOLIET & EASTERN.—Effective January 1, R. P. Little appointed acting editor. J-Milepost Magazine, Joliet, Ill., to replace R. J. Schiek, assigned special duties.

GREAT NORTHERN.—Richard G. Tousch, assistant shop superintendent, Spokane, Wash., appointed superintendent of shops there, succeeding A. H. Molenke, who retired January 1.

KANSAS, OKLAHOMA & GULF-MIDLAND VALLEY-OKLAHOMA CITY-ADA-ATOKA.--C. W. Cerny,



Harold A. Gundersen C&NW



J. Robert Kunkel C&NW

commercial agent, Pittsburgh, C. E. Gorman, freight department representative, St. Louis, J. G. Munford, commercial agent, Los Angeles, and Raymond C. Milnes appointed general agents, Cleveland, Des Moines, San Francisco and Los Angeles, respectively.

LEHIGH & NEW ENGLAND—N. L. Grinager, assistant to chief of personnel, Bethlehem, Pa., appointed assistant chief of personnel and his former position abolished.

MILWAUKEE.-James P. Reedy, assistant general

solicitor, appointed general attorney, Chicago.

MINNEAPOLIS, NORTHFIELD & SOUTHERN.—
Anthony H. Babich, general agent. Minneapolis, appointed assistant general freight agent there, to succeed Leslie E. Edwards, who retires January 31. William J. Sexton named to replace Mr. Babich.

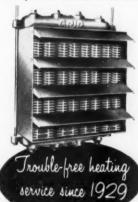
MISSOURI PACIFIC.—Lynn V. Richards appointed general agent, Cleveland, Ohio, succeeding Ben A. Gililland, retired. Hugo A. Franke named general agent, Philadelphia, Pa., succeeding E. E. Roethemeier.

NORFOLK & WESTERN.—Harold E. Carter, assistant superintendent, Norfolk Terminals, appointed superintendent, Shenandoah division, Roanoke, Va., succeeding F. E. Taylor, retired. (Continued on page 138)

# GRID CAST IRON STEAM HEAT TRANSFER SURFACE

# UNIT HEATERS BLAST HEATERS RADIATORS

one piece construction high test cast iron heating sections



GRID All cast iron neating sections:

GRID All cast iron construction provides the answer to unit heater and blast heater problems for railroads... the GRID condenser eliminates internal electrolytic corrosion because all metals in contact with steam are similar... eliminates external corrosion because GRID cast iron construction resists acid fumes and contaminated air... eliminates use of reducing valves where high stream pressure is used, because GRID will operate on steam pressures up to 250 P.S.I.... 450° temperature. No soldered, brazed, welded or expanded connections—a construction designed and built to last for years... uninterrupted service records on railroads of more than twenty years are common among GRID users.



GRID construction provides maximum heating performance ... more air changes at lower outlet temperatures ... warm, comfortable air in ample volume to floor level ... no wasted heat through stratification. The heat transfer element of GRID Unit Heaters, Blast Heaters and Radiators is a high tensile strength cast iron casting with radiation fins cast in one piece to the steam chamber ... one piece fin section assures constant heat transfer ... the wide fin spacing prevents clogging and permits easy cleaning. GRID steam heat transfer service is designed and manufactured to be better . . . GRID installations save money as GRID requires no maintenance ... units installed in 1929 are still operating. No ordinary unit heater approaches GRID's record for trouble-free heating service.



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and bottom manifolds connected to fin sections by special threaded nipple . . bottom view shows wide fin spacing . . fins are cast integral with steam chamber

#### D. J. MURRAY MANUFACTURING CO.

Manufacturers Since 1883

WAUSAU, WISCONSIN

### Handy Reference to Railroad Associations

The following list gives names and addresses of certaries and dates and places of next or regular

AIR BRAKE ASSOCIATION. -John B. Ball. 224

AIR BRAKE ASSOCIATION. —John B. Ball, 224
S. Lincoln Ave., Autores, Ill.
ALLIED RAILWAY SUPPLY ASSOCIATION.—J. D. Ristine, 80 E. Jackson Blyd., Chicago 4.
AMERICAN ASSOCIATION OF BACAGEE TRAFFIC MANACERS.—W. B. Paul, Seaboard Air Line, Norfolk IO, Va. Annual meeting, May 7-9, Di Lido Hotel, Miami Beach.
AMERICAN ASSOCIATION OF PASSENCER RAYE MEN.—R. L. Piacentini, 732 McCormick Blvd., Chicago 4.
AMERICAN ASSOCIATION OF PASSENCER TRAFFIC OFFICERS.—B. D. Branch, Hotel Manhaten, 44th St. & 8th Ave., New York. Interim meeting, April 29-30, Congress Hotel, Chicago. Annual meeting, October

FIGURES.—B. D. Branch, Hotel Manhattan, 44th St. & 8th Ave., New York. Interim meeting, April 29-30, Congress Hotel, Chicago. Annual meeting, October 5-7, La Fonda Hotel, Santa Fe, N. M. AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDERS.—Miss Elise La Chance, Room 835, 431 S. Dearborn St., Chicago 5. Annual meeting, June 3-5, La Saile Rotel, Chicago.

AMERICAN ASSOCIATION OF TRAVELING PASSENCER. ACRIVES.—C. A. Melin, P. O. BOS 2025 Cleveland 1. AMERICAN COUNCIL OF RAILROAD WOMEN.—Min. Gentrude E. Lewis, Atchison, Topeka & Santa Fe, Topeka, Kul.

AMERICAN COUNCIL OF RAILMOAD WOMER.—Mrs. Gertrude E. Lewis, Atchison, Topeka & Santa Fe, Topeka, Kan.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—

N. S. Hibshman, 33 W. 39th St., New York 18.

Committee on Land Transportation.—I. C. Price, General Electric Co., I River Road, Schenetady S. American Railway Bridge AND BUILDING ASSOCIATION.—Miss Elsie La Chance, Room 855, 451 S. Dearborn St., Chicago S. Annual meeting, September 15-17, Contrad Hilton Hotel, Chicago.

AMERICAN RAILWAY CAR INSTITUTE.—W. A. Renz, 19 E. 47th St., New York 17.

J. W. Ewall, Pennsylvania, 6 Penn Center Plaza, Philadelphia 4. Annual meeting, April 27-30, Netherland Hilton Hotel, Cincinnati.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railway Engineering Division—Neal D. Howard, 59 E. Van Buren St., Chicago S. Annual meeting, March 11-13, Hotel Sherman, Chicago.

AMERICAN RAILWAY MACAZINE EDITORS ASSOCIATION.—J. J. Knilke, Santa Fe Magazine, Room 334, Railway Exchange, Chicago 4. Annual meeting, September 22-24, Waldorf-Astoria, New York.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. I. Painter, 1916 Race Sc., Philadelphia 3. Committee Week February 9-15; Hotel Statler, St. Louis. Annual meeting, June 22-28, Hotel Statler, Boston. American Society for Testing Materials.—R. I. Painter, 1916 Race Sc., Philadelphia 3. Committee Week February 9-15; Hotel Statler, Boston. American Society for Testing Materials.—R. I. Painter, 1916 Race Sc., Philadelphia 3. Committee Week February 9-15; Hotel Statler, St. Louis. Annual meeting, June 22-28, Hotel Statler, Boston. American Society for Testing Materials.—R. I. Painter, 1916 Race Sc., Philadelphia 3. Committee Shoe Company, Mahwah, N. J.

American Wood-Prasseyurara' Association.—W. A. Penrose, 839 Seventeemth St., N.W., Washington G. D. C. Annual meeting, April 14-16, Hotel Statler, Lou Angeles.

Association And New York 18. Rathona Materian Wood-Prasseyurara' Association.—W. A. Penrose, 839 Seventeemth St., N.W., Washington G. D. C. Annual meeti

D. C. Annual meeting, April 14-16, Hotel Statler, Los Angeles.

Associated Traypic Clubs of America.—R. P. DeGroote, Luckenbach Steamship Co., Inc., 110 S. Dearborn St., Room S14, Chicago S.—Annual meeting, September 29-30, Palace Hotel, San Francisco.

Association of American Rahmond Division.

Association of American Rahmond Division.

St. Louis S. Annual meeting. September 23-25, Queen Elizabeth Hotel, Montreal, Que.

Association of American Rahmonds.—Stanley J. Strong, Transportation Bildg., Washington 6, D. C.

Operations and Maintenance Department.—R. G.

May. Vice-president, Transportation Bildg., Washington 6, D. C.

Operations and Maintenance Department.—R. G.

May. Vice-president, Transportation Bildg., Washington 6, D. C.

Operating Transportation Division.—A. I. Ciliske.

59 E. Van Buren St., Chicago S.

Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago S.

Communications Section.—A. H. Grothmann, 59

E. Van Buren St., Chicago S. Annual meeting, May 13-15, Hotel Muchlebach, Kanasa City, Mo.

Fire Protection and Insurance Section.—W. E. Todd. 59 E. Van Hotel St. Van Buren St. Chicago S.

13-15, Hotel Muchlebach, Kansas City, Mo.
Fire Protection and Insurance Section.—W. E.
Todd, 59 E. Van Buren St., Chicago 5.
Freight Loss and Damage Prevention Section.—
G. H. Ruhle, 59 E. Van Buren St., Chicago 5,
Annual meeting, April 30, Roney Plaza Hotel, Miami
Begch.

Annual meeting, April 30, Ronev Plaza Hotel, Mismi Beach.
Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago S. Annual meeting, May 20-22, Queen Elizabeth Hotel, Montreal.
Medical and Surgical Section.—F. J. Parker, 59 E. Van Buren St., Chicago S.
Protective Section.—F. J. Parker, 59 E. Van Buren St., Chicago S.
Safety Section.—F. J. Parker, 59 E. Van Buren St., Chicago S. Annual meeting, June 24-26, Lowery Hotel, St. Paul.
Electrical Section of the Engineering and Mechanical Divisions.—C. C. Elber, 59 E. Van Buren St., Chicago S. Annual meeting, June 24-26, Hotel Sherman, Chicago.
Engineering Division.—E. G. Gehrke, 59 E. Van Buren St., Chicago S.
Construction and Maintenance Section.—Neal D. Howard, 59 E. Van Buren St., Chicago S.
Construction and Maintenance Section.—Neal D. Howard, 59 E. Van Buren St., Chicago S.
Signal Section.—R. H. C. Balliet, 59 E. Van Buren St., Chicago S. Annual meeting, March 11-13, Hotel Sherman, Chicago.
Signal Section.—R. H. C. Balliet, 59 E. Van Buren St., Chicago S. Annual meeting, March 11-13, Hotel Sherman, Chicago.
Signal Section.—R. H. C. Balliet, 59 E. Van Buren St., Chicago S. Annual meeting, September 16-18, Mørrison Hotel, Chicago.

Mechanical Division.—Fred Peronto, 59 E. Van Buren St., Chicago S. Annual meeting, June 24-26, Hotel Sherman, Chicago.
Purchases and Stores Division.—John L. Timanus, Transportation Bldg., Washington 6, D. C. Annual meeting, June 4-6, Palmer House, Chicago.
Freight Claim Division.—R. E. O'Donnell, 59 E. Van Buren St., Chicago S. Annual meeting, April 29-May 1, Roney Plaza Hotel, Miami Beach.
General Claims Division.—Bruce H. Smith, 59 E. Van Buren St., Chicago S. Annual meeting, May 21-23, Antlers Hotel, Colorado Springs.
Car Service Division.—Arthur H. Gase, Chairman, Transportation Bldg., Washington 6, D. C.
Finance, Accounting, Tazation and Valuation Department.—Arthur R. Seder, Vice-president, Transportation Bldg., Washington 6, D. C.
Accounting Division.—Philip A. Lyon, Transportation Bldg., Washington 6, D. C. Annual meeting, May 26-29, Jung Hotel, New Orleans.
Treasury Division.—Philip A. Lyon, Transportation Bldg., Washington 6, D. C. Annual meeting, May 26-29, Jung Hotel, New Orleans.
Treasury Division.—Philip A. Lyon, Transportation Bldg., Washington 6, D. C.
ASSOCIATION OF INTESTATE COMMERCE COMMISSION PRACTITIONESS.—Milss Sarah F. McDonough, Executive Secretary, 2218 ICC Building, Washington 25, D. C. Annual meeting, May 3-9, Hotel Mayflower, Washington, D. C.
ASSOCIATION OF RALEROAD ADVERTISING MANAGERS.—A. W. Eckstein, Illinois Central, 135 E. Eleventh Pl., Chicago 5. Annual meeting, March 9-12, Mayflower Hotel, Washington, D. C. Continuing on to Norfolk and Williamsburg through March 14.
BRIDGE AND BUILDING SUPPLY ASSOCIATION.—I. R. Gurley, Modern Railroads, 201 N. Wells St., Chicago 6.
CANADIAN RAILWAY CLUB.—W. J. Cadogan, Canadian National Railways, P. O. Box 162, Montreal 3, Quebec. Regular meetings, second Monday of each month except June, July and August, Sheration-Mount Roval Hotel, Montreal, Que.
Car Department Professor Commission Strate, Commission State, Councer Binfs, L. Regular meetings, second Thuraday of each month except June, July and August, Chicago 18, Rounal August, Hotel Statl

EASTERN CAR FOREMAN'S ASSOCIATION.—F. Frey, cette, Ind.

EASTERN CAR FOREMAN'S ASSOCIATION.—F. Frey, Central of New Jersey, Room 32, Jersey City Terminal, Jersey City 2, Regular meetings, second Friday of January, February, March, April, May, October and November, Railroad-Machinery Club, 30 Church St., New York,

LOCOMOTIVE MAINTANANCE OFFICERS' ASSOCIATION. C. M. Lipscomb, 1721 Parker St., North Little Rock, Ark,

MAINTENANCE OF WAY CLUB OF CHICAGO.—S. Kosco, 135 E. Eleventh Place, Chicago S. Regular meetings, October through April, Hamilton Hotel, Chicago, October through April, Hamilton Rogers, Simmons-Boardman Publishing Corp., 30 Church St., New York, 7. Meets in February, April, October and December, Railroad-Machinery Club, 30 Church St., New York, Next meeting, February 27.

MILITANY RAILWAY SERVICE VETRANS.—F. W. Okle,

CIUD., 30 CHUICO SI., INEW LOTE. INEXT INCELLIBRY 27.
MILITARY RAILWAY SERVICE VETERANS.—F. W. Okie, Bessemer and Lake Erie, P. O. Box 536. Pittsburgh 30. Annual reunion, September 19-21, Mayflower Hotel, Washington, D. C.
MISSISSIPPI VALLEY MAINTENANCE OF WAY CLUB.—R. B. Davis, 906 Olive St., St. Louis. Regular meetings second Monday of each month September through May. Coronado Hotel, St. Louis.
NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—R. Everette Kreeger, 5310 ICC Bidg., P. O. Box 684, Washington 4, D. C. Annual meeting, November 17-20, Atlanta-Biltmore Hotel, Atlanta.
NATIONAL ASSOCIATION OF RAILROAD ENGINEERS OF

lanta-Biltmore Hotel, Atlantz.

NATIONAL ASSOCIATION OF RAILROAD ENGINEERS OF TEST.—C. M. Angel (Chairman) Cheaspeake & Ohio, 8th Ave., at 28th St., Huntington, W. Va. Next meeting, March 10, Hotel Sherman, Chicago.

NATIONAL ASSOCIATION OF SHUFREST AVISON BOARDS.—R. S. Wright, Carborundum Co., Buffalo Ave., Niagara Falls, N. Y. Annual meeting, October 7-9, Penn. Sheraton Hotel, Pittsburgh.

NATIONAL DEFENSE TASSOCIATION.

NATIONAL DEFENSE TRANSPORTATION ASSOCIATION.— Lily M. Beauchamp, Suite 728, 1001 Connecticut Ave., Washington 6, D. C. Annual meeting, Novem-

ber 9-13, Sheraton-Jefferson Hotel, St. Louis.
NATIONAL INDUSTRIAL TRAFFIC LEACUR.—L. J. Dorr,
Suite 909, Sheraton Bidg., 711 14th St., N.W., Washington 5, D. C. Annual meeting, November 20-21,
Commodore Hotel, New York.
NATIONAL RALWAY AFFILANCES ASSOCIATION.—Kenneth Cavins, Fairmont Railway Motors, Inc. 310
S. Michigan Are, Chicago 4. Lewis Thomas, Asst.
Sery., 35 E. Yan Buren St., Chicago 5. Exhibit,
March 10-13, Coliseum, Chicago.
NATIONAL SAFET COUNCIL, RAILBOAD SECTION.—
L. C. Hahner, Eighn, Joliet & Eastern, Joliet, Ill.
NEW ENCLAND RALDROAD CLUB.—William M. Mc.
Combs, 35 Lewis Wharf, Boston 10. Regular meeting, second Tuesday of cach month, except MaySeptember, incl., Hotel Vendome, Boston. Annual
banquet second Thursday of May each year.
New York T. Regular meetings, third Thursday
of each month except June, July, August, September
3th, New York T. Regular meetings, third Thursday
of each month except June, July, August, September
and December. Century Room, Commodore Hotel.
Reception 6 p.m.; dinner, 7; meeting, 8:15.
Northwest Cammar's Association.— N. J. Maglich, Minnesota Transfer Ry., 2071 University Ave.,
St. Paul 4, Minn. Regular meetings, first Monday
of each month, except June, July, and August, Midway Club, 1931 University Ave., St. Paul.
Northwest Matheman And September, Hotel Nicollet, Minnespolis; fourth Tuesday of
March and November, Hotel St. Paul, St. Paul.
Northwest Matheman And September, Hotel Nicollet, Minnespolis; fourth Tuesday of
March and November, Hotel St. Paul, St. Paul.
Northwest Matheman Annuary, May and September, Hotel Nicollet, Minnespolis; fourth Tuesday of
March and November, Hotel St. Paul, St. Paul.
Northwest Matheman Annuary, May and September, Hotel Nicollet, Minnespolis; fourth Thursday,
Midway Club, 1931 University Ave., St. Paul.
PAGIFIC RAHLWAY CLUB.—S. E. Byler, 122 E.
Sixth St., Los Angeles 14. Meetings in alternate
months in San Franciaco, and Los Angeles, One
meeting a year at Sacramento and at Roseville.
RALLROAD PUBLIC RELATIONS ASSOCIATION.—J. Don

Sixth St., Los Angeles 14. Meetings in alternate months in San Francisco, and Los Angeles. One meeting a year at Sacramento and at Roseville.

RAILROAD PUBLIC RELATIONS ASSOCIATION.—1. Don Parel, Association of American Railroads, Transportation Bidg., Washington 6, D. C. Annual meeting, June 5-8, Greenbrier Hotel, White Sulphur Springs, W. Va.

RAILWAY CLUS OF PITTSBURGE.—G. E. Morrison, 2710 Koppers Bidg., Pittsburgh 19. Regular meetings third Thursday of each month, except June-September, incl., and December, Hotel Sherwya. Dinner. o. 30 p.m.: meeting, 8.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—L. R. OSWAID, TRANSPAULINERS' ASSOCIATION.—L. H. Peters, New York Central, Room 1213, 139 W. Ven Buren St., Chicago S.

RAILWAY FUEL AND OFFERNING OFFICERS ASSOCIATION.—L. H. Peters, New York Central, Room 1213, 139 W. Ven Buren St., Chicago S.

RAILWAY PROCESS INSTITUTE.—T. A. Nooner, Jr., First National Bank Bidg., Chicago 3.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—A. W. Brown, 527 Lexington Ave., New York 17. Exhibit in conjunction with meetings of the Mechanical and Purchases and Stores Divisions, AAR, June 22-27, 1959, Convention Hall, Atlantic City.

RAILWAY TEREGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—C. C. Neat meeting, April 35-17, Hotel Morrison, Chicago.

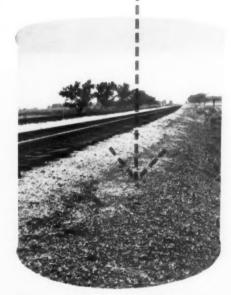
RAILWAY TEREGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, 30 Church St., New

York 7,
RAILWAY TIE ASSOCIATION.—Roy M. Edmonde, 1221
Locust St., St. Louis 3. Annual meeting, October
29-31, Peabody Hotel, Memphis.
ROADMASTRES AND MAINTENANCE OF WAY ASSOCIATION.—Mins Eline La Chance, Room 835, 431 S.
Dearborn St., Chicago S. Annual meeting, September 15-17. Conrad Hilton Hotel, Chicago. ROBOMSTERS AND MAINTENANCE OF WAY ADDITION.—MISE Elise La Chance, Room 835, 431 S, Dearborn St., Chicago S. Annual meeting, September 15-17. Conrad Hitton Hotel, Chicago. ST. LOUIS RAHLROAD DIESEL CLUB. —F. C., Whitlock, Terminal Railroad Association of St. Louis, 376 Union Station, St. Louis 3. Regular meetings, second Tuesday of each month. Hotel York. Dinner, 7 p.m.; meeting, 8. SINMA APPLIANCE ASSOCIATION.—G. A. Nelson, 30 Church St., New York 7. SOUTHEASTERS RAHLWAY CLUB.—H. W. Brewer, Sea. board Air Line, P. O. Box 6351, Jacksonville, Fla. Regular meetings, second Tuesday in February, April, June, August, October and December. Mayflower Hotel, Jacksonville, Southers and Southeast Allanta. Annual meetings, third Thursday in January, March. May, July and September at Allanta. Annual meeting in November.
Southeam Association of Cas Service Oytens.—F. I. Umhau, Southern Ry, Atlanta 3. Annual meeting, January 22-23, Montelone Hotel. New Orleans. TORONTO RAILWAY CLUB.—W. F. Saunders, P. O. Box 8, Terminel "A." Toronto 1, Ont. Regular meetings, Jourth Ionday of each month except February, June, July, August and December, Roval York Hotel.

Tarack Supply Association.—Lewis Thomas, O and Company, 59 E. Van Buren St., Chicago S. WESTERN ASSOCIATION.—Grallway Tax COMMISSIONERS.—V. L. Sides, Illinois Central, Room 305, 175 E. Eleventh Fl., Chicago S. WESTERN ASSOCIATION.—Lewis Thomas, O and Company, 59 E. Van Buren St., Chicago S. WESTERN ASSOCIATION.—Lewis Thomas, O and Company, 59 E. Van Buren St., Chicago S. WESTERN ASSOCIATION.—Lewis Thomas, O and Company, 59 E. Van Buren St., Chicago S. WESTERN ASSOCIATION.—Lewis Thomas, O and Company, 59 E. Van Buren St., Chicago S. WESTERN ACCOUNTS.—E. E. Thulin Suite 339, Hotel Sherman, Chicago I. Regular meetings held in February, March. Auril, May, October, November and December (Ladies night).



UROX ON ...



WEEDS GONE!

clean as a whistle!



# Read how you can get longer-lasting weed control at lower cost with amazing UROX weed Killer

It's a fact! Urox is so effective—so long-lasting—that single applications have given outstanding control for as long as 12 months on a wide range of annual and perennial grasses and broad-leafed weeds.

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DISCOVER HOW YOU CAN GET CLEAN-AS-A-WHISTLE WEED CONTROL AND SAVE MONEY, TOO!

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Weed Killer Department

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ALLIED CHEMICAL & DYE CORPORATION
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- Please send free folder giving complete information on new Urox herbicide.
- ☐ Please have representative call.

Name\_

Title\_

Company

Address

City

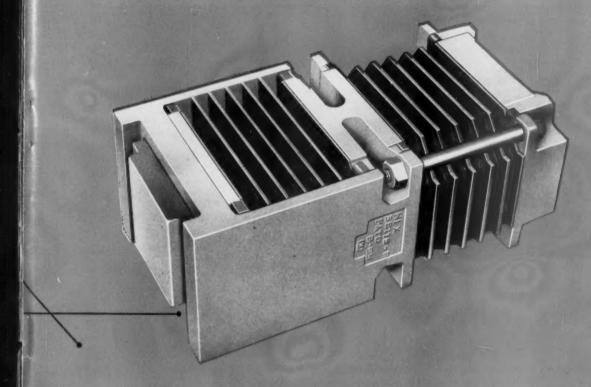
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RA-1

the Key to
reducing car
damage

NATIONAL

POLICIES . VOKES . DEAFT GEARS . FREIGHT TRUCKS . JOURNAL BOXES



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# MARKET OUTLOOK at a glance

#### Freight Car Loadings

Loadings of revenue freight for the week ended January 11 were not available when this issue of Railway Age went to press.

Loadings of revenue freight for the week ended January 4 totaled 471,749 cars; the summary, compiled by the Car Service Division, Association of American Railroads, follows:

REVENUE FREIGHT CAR LOADINGS

		AK LOADIN	
For the week	ended Sat	urday, Jan	uary 4
District	1958	1957	1956
Eastern	71,419	91,074	104,064
Allegheny	84,712	115,099	123,801
Pocahontas	39,772	45,448	50,967
Southern	93,722	106,801	117,860
Northwestern	51,403	60,529	65,221
Central Western	89,396	95,635	99,590
Southwestern	41,325	46,615	49,796
		*	
Total Western			00 / /00
Districts	182,124	202,779	214,607
Total All Roads	471,749	561,201	611,299
Commodities:			
Grain and grain			
products	42,899	42,886	41,178
Livestock	3,890	5,218	7,706
Coal	98,127	105 713	129,282
Coke	6,741	12,403	13,031
Forest Products	28,544	33,677	38,925
Ore	15,246	20,372	17,362
Merchandise I.c.I.	35,051	42,139	48,106
Miscellaneous	241,251	298,793	315,709
January 4	471,749	561,201	611,299
	1957	1956	1955
December 28	410,022	487,546	570,412
December 21	590,343	698,424	667,479
December 14	603,036	716,652	709,132
December 7	617,838	738,251	721,518
		-	

IN CANADA.—Carloadings for the ten-day period ended December 31 totaled 66,038 cars, compared with 65,145 cars for the previous sevenday period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connec- tions
Totals for Canada:		
December 31, 1957	66,038	31,994
December 31, 1956	75,226	40,248
Cumulative Totals:		
December 31, 1957	4,037,381	1,619,078
December 31, 1956	4,402,830	1,741,024

### **New Equipment**

#### FREIGHT-TRAIN CARS

- ► Ann Arbor-Wabash.—Ordered 152 70-ton covered hopper cars (102 for Wabash and 50 for Ann Arbor), from American Car & Foundry; Ann Arbor's cars have been delivered, as have 50 of the Wabash's; remainder will be delivered this month.
- ► Soo Line.—Ordered 60 70-ton covered hopper cars, Pullman-Standard, for delivery next March.
- ► Union Pacific.—Ordered 400 70-ton gondola cars (200 from American Car & Foundry and 200 from Bethlehem Steel), and 200 50-ton box cars, Pullman-Standard.

#### LOCOMOTIVES

▶ Diesel Ownership Still Rising.—Diesel-electric units owned or leased by Class I roads totaled 27,272 on December 1, AAR reports; this was an increase of 1,146 over December 1, 1956, and 164 more than were owned November 1, 1957.

	Owned or Leased December 1			nviceable mber 1	Waitin	
	1957	1956	1957	1956	1957	1956
Diesel (Units)	27,272	26,126	278	38	1,018	856
Steam (Locomotives)	2,561	3,820	883	477	568	586
Electric (Units)	587	606	15	12	68	72

### Maintenance Expenditures

▶ Down 0.2% in October.—Expenditures by Class I roads for maintenance of equipment, way and structures in October 1957 were down about a half million dollars compared with same 1956 month, according to report of ICC Bureau of Transport Economics and Statistics summarized below:

	October '57	October '56	% Change
Maintenance of Way & Structures	\$123,116,254	\$124,247,194	-0.9
Maintenance of Equipment	163,215,257	162,599,933	+0.4
Totals	286,331,511	286,847,127	-0.2

### **New Facilities**

- Delaware, Lackawanna & Western.—Placed order with Union Switch & Signal Division of Westinghouse Air Brake Company for equipment to install centralized traffic control on approximately 30 miles of track between Port Morris, N.J., and East Stroudsburg, Pa.; when installation is completed, 30 miles of double track will be converted to single track, and two passing sidings will be in operation to facilitate two-way flow of traffic along the line.
- ► Louisville & Nashville.—Placed order with Union Switch & Signal Division of Westinghouse Air Brake Company for centralized traffic control equipment to control and consolidate the Black Creek, Bowl Yard, AX and FY tower interlockings at Boyles, Ala.

O

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(Continued from page 131)

W. A. Foris, assistant superintendent, car depart-W. A. Forts, assistant superintendent, car department, Roanoke, named master mechanic, Norfolk division, Crewe, Va., succeeding H. L. Scott, Jr., promoted to succeed Mr. Carter, W. H. Morris, division car inspector, Eastern General Division, Roanoke, replaces Mr. Faris.

J. T. Cutcliff, general agent, Pittsburgh, appointed assistant freight traffic manager, Roaloks P. Morts over avoid agent, Wilkington

noke. R. P. Hock, commercial agent, Wilmington, N.C., advanced to general agent at Chattanooga, Tenn., succeeding T. L. Dovis, transferred to Pittsburgh. J. R. McMichael, assistant to general coal freight agent, Roanoke, promoted to assistant general freight agent there and is succeeded by J. A. Grasty.

NORTHERN PACIFIC.—W. C. Nelson, assistant to director of purchases, St. Paul, Minn., retired January 1 and his duties assumed by W. A. Morshall, named assistant purchasing agent. Mr. Marshall has been an operating department trainee with the NP since April 1957.

ONTARIO NORTHLAND.—A. Jardine, assistant general manager, North Bay, Ont., appointed general manager there, succeding Archibald Freeman, retired. H. R. McCleary, acting superin-Englehart, Ont., appointed superintendent.

PENNSYLVANIA.-Harold L. Wood, master merechanic, Northwestern region, Chicago, transferred to Sunnyside Yard, Long Island City, New York, succeeding Richard C. Johnston, whose promotion to superintendent of equipment, Northern region, Buffalo, N.Y., was noted in Railway Age, Jan. 6, p. 36. W. H. Miller, master mechanic, Lake Region, Canton, Ohio, succeeds Mr. Wood ceeds Mr. Wood.







John T Ward Seaboard

ROCK ISLAND.—Effective November 1, 1957, F. B. Needham, auditor disbursements, Chicago, appointed assistant general auditor, succeeding G. C. Sprague, retired. W. J. Taylor, special assistant to general auditor, named assistant auditor disbursements, succeeding L. J. Zenke, who replaces Mr. Needham. H. J. Adams appointed assistant to general auditor. H. A. Miller succeeds Mr. Taylor.

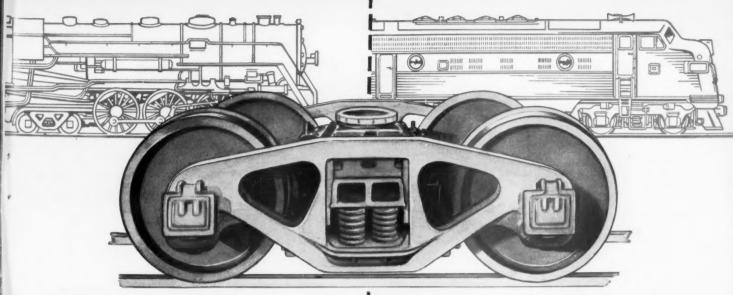
SANTA FE.-B. V. Kesfer named supervisor of freight claim prevention, Los Angeles, succeeding C. W. Philhour, who retired December 31,

SEABOARD.—Bernard J. King, assistant freight traffic manager Atlanta, Ga,, named assistant to vice-president in charge of freight traffic,

E. M. Tucker, superintendent dining cars and

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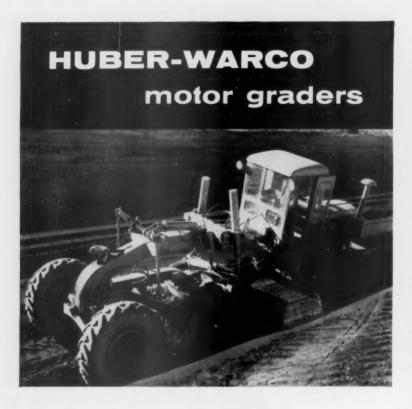
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Name	_





W. H. Rose Seaboard



Wesley H. Young



H. F. Perritt



Joseph D. Bond Soo Line

news stands, Hamlet, N.C., retired December 31. John T. Ward, principal assistant engineer, Norfolk, named assistant chief engineer, succeeding Mr. Hutcheson.

H. W. Barber, assistant auditor of revenues, Portsmouth, Va., appointed auditor of revenues there, succeeding W. D. Steele, who retired last November 30.

Thomas B. Hutcheson, assistant chief engineer, Norfolk, promoted to chief engineer there, succeeding W. D. Simpson, who retired December

W. H. Rose, assistant general purchasing agent, Norfolk, promoted to general purchasing agent there, succeeding R. W. Rogers, who retired December 31, 1957. Wesley H. Young, general storekeeper, promoted to succeed Mr. Rose as assistant general purchasing agent. H. F. Perritt, assistant general storekeeper, succeeds Mr. Young as general storekeeper. William E. Holland, Jr., special assistant to general purchasing agent, aucceeding Thomas M. Sweeny, promoted to succeed Mr. Perritt as assistant general storekeeper.

SOO LINE.—Joseph D. Bond, general manager, Minneapolis, elected vice-president and director there, effective January 1.

WABASH.—H. L. Pigott, general passenger agent, Detroit, retired January 1. Leland A. DaGue appointed general agent, Birmingham, Ala., succeding W. G. Kidd, retired.

WESTERN PACIFIC.—Mrs. Harriet P. Tyler, general solicitor, San Francisco, retired December 31, 1957, after 36 years' service.

1957, after 36 years' service.

Willium F. Puden, assistant freight claim agent,
San Francisco, appointed freight claim agent
there, to succeed Roland L. Gohmert, who retired December 31, 1957.

#### OBITUARY

Michael J. O'Brien, 69, assistant to the chairman of the Milwaukee, died January 1.

Edward E. O'Reilly, 81, retired chief auditor of freight and passenger accounts. Chicago & Eastern Illinois, died December 30, 1957.

Address

# OF TOP

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# 1958 a Big Year - If We Sell

The railroad industry is far better off today than it used to be—in one vitally significant respect.

Here is why: when practically all freight traffic was moving by rail, the only appreciable hope for increased tonnage lay in the growth of national production. This growth was dependable, but gradual.

Today, with less than half of the country's total ton-miles riding the rails, there's a vast pile of **potential business** right at the railroads' doorstep.

The big need is for the railroads to get completely commercial. Traffic should come to them up to the very limit of their capacity, if they give (1) acceptable service; (2) price the service skillfully; and (3) sell their product competently.

Here is a novel opportunity for the railroad industry—one with potentialities that most railroad men, so far, little realize.

Railroad organizations are still following the traditional traffic-development habit they learned during the century when the only way that traffic could grow was from increased production. There's still nothing wrong with that method of traffic building, of course. But it isn't the only method, nor the quickest, nor necessarily the

most fruitful. Much more new traffic is potentially available by winning to the rails some of the tonnage now moving in other ways, but which could be better moved by rail.

In recent months, with railroad traffic down, the truck people have been reporting traffic increases. Why and how? With national production reduced, it's quite evident that truck operators have more than offset the decline in available traffic by capturing a *larger share* of total traffic.

They have escaped the business recession, and then some, by effective selling—a term which embraces (a) providing an attractive service, (b) pricing it skillfully, and (c) making known its merits to potential customers. There's no reason whatever why the erosion of railroad tonnage cannot be halted, and reversed, if the railroads will develop the commercial zeal truck operators have shown.

Railroads in two of the three territories have already initiated comprehensive joint research into improved pricing and merchandising (see page 15). Some individual railroads, also, have done a lot of work in this area—and 1958 will see still more of it undertaken.

The railroads have a good product—potentially, even where not always realized in practice. The same techniques are available to them in profitable pricing that other industries use successfully. A large increase in sales zeal and skill could take the railroads' product—freight and passenger service—and convert it into a lot more traffic and net income, not too slowly either.

GOD HELPS THEM THAT . . . : The railroads will never get their full economic share of the nation's traffic until a lot of political inequities are corrected. But, here again, salesmanship—and only salesmanship—can develop a more helpful attitude by legislators and regulators. There's no reason why 1958 should not be a momentous and happy year for the railroads—if they will intensify their effort and skill in selling, to customers and also to legislators and regulators.



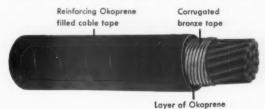
CM-OT\* combines the advantages of both a metallic and non-metallic sheath in direct burial installations. The corrugated bronze tape gives high compressive strength, moisture resistance and mechanical protection. The reinforced wall of Okoprene applied over the corrugated metal prevents chemical and electrolytic corrosion. Yet the construction is highly flexible, easily terminated, and so light it's often used for aerial installations.

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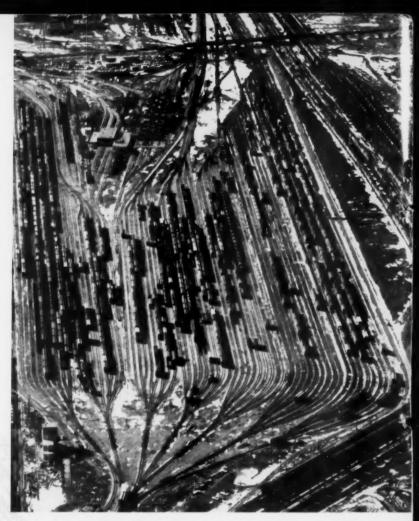
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